

Children's Television Workshop Enter the World of Science and Technology

Jan./Feb. 1986

# 3·2·1·Contact<sup>®</sup>

## Kids Helping Kids



4958\*\*\*\*\*5-DIGIT 99403  
742372 ETZ 25781093 1448 APR86  
01#6P

Including  
**ENTER**  
Computer News • Games  
Software Reviews  
Programming





**HOORAY! HOORAY!  
THERE'S A NEAT NEW WAY...**



**TO GET A GREAT CREST CHECKUP.  
NEW CREST PUMP-HOORAY!**





# 3-2-1-Contact

**Publisher**  
Nina B. Link  
**Editor**  
Jonathan Rosenbloom  
**Art Director**  
Al Nagy  
**Managing Editor**  
Aura Marrero  
**Associate Editors**  
Richard Cheval  
Russell Miller  
**Assistant Editor**  
Ellen Rudolph Mednick  
**Assistant Art Director**  
Jo Lynn Crabs

**RESEARCH**  
Research Director/Publications  
Dr. Istar Schwager  
Field Research Coordinator  
Andrés Henriquez

**BUSINESS**  
Subscription Fulfillment Manager  
Lucille Friedman  
Promotion Manager  
Elizabeth McNamara  
Production Director  
Carlos N. Crosbie  
Production Manager  
Kathy Lee

**ADVERTISING SALES**  
Advertising Director/Periodicals Group  
Myles Grossman  
Advertising Representatives  
Jane Abram  
Gail DeLott  
Advertising Coordinator  
Jayne Porrazzo

**ADVISORS**  
Dr. Gerald S. Lesser  
Professor, Harvard Graduate  
School of Education  
Dr. Charles Walcott  
Director, Lab. of Ornithology,  
Cornell University  
Dr. Jearl Walker  
Professor of Physics,  
Cleveland State University  
Dr. Charles A. Whitney  
Professor of Astronomy,  
Harvard University

**ADVERTISING SALES OFFICE**  
Myles Grossman  
Advertising Director  
3-2-1 Contact Magazine  
1 Lincoln Plaza  
New York, NY 10023  
(212) 595-3456

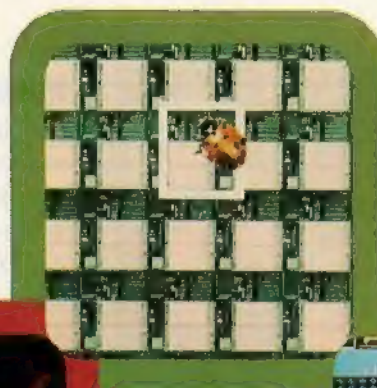
Applied for membership, Audit Bureau  
of Circulations.

3-2-1 Contact (ISSN 0193-4105) is a publication of the  
Children's Television Workshop, published ten times  
during the year, monthly except for February and Au-  
gust. © 1986 Children's Television Workshop. All  
rights reserved. All contents owned by the Children's  
Television Workshop and may not be reprinted without  
permission. 3-2-1 Contact is a trademark and a service  
mark of the Children's Television Workshop. Printed in  
the U.S.A. Number 63, January/February 1986. Editor-  
ial offices, One Lincoln Plaza, New York, N.Y. 10023.  
Application to mail at second-class postage rates is  
pending at New York City and additional mailing of-  
fices. Send subscription orders to 3-2-1 Contact, P.O.  
Box 2933, Boulder, CO 80322. POSTMASTER: Send  
address changes to: 3-2-1 Contact, P.O. Box 2933,  
Boulder, CO 80322 (including label from cover of mag-  
azine). Subscriptions: 1 year U.S.A. \$11.95; Canada  
and other countries add \$6. Bulk copy rates to schools  
and other institutions available on request.



Page 2

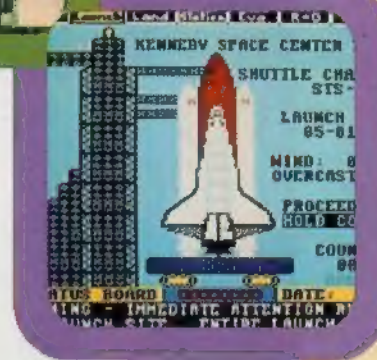
Page 4



Page 18



Page 34



## Featuring This Month

- 4** On the Other Hand:  
A Look at Life for  
Lefties
- 10** Reaching Out: U.S.  
Kids Help Kids Around  
the World
- 18** Shutterbug!
- 20** Busy Bodies: The Brain
- 24** Dinner Is Served
- 30** Grab the Gremlin: A  
Game for Two Players

## ENTER: The High-Tech World of Computers

- 31** It's Amaze-ing!
- 32** Newsbeat
- 33** The Slipped Disk Show

- 34** Reviews
- 36** Basic Training
- 38** Crossword Puzzle

## Plus Our Regular Departments

- 2** TNT: Tomorrow's News  
Today
- 8** Factoids
- 14** The Bloodhound Gang
- 26** Any Questions?
- 28** Extra!
- 39** Mail
- 41** Did It!

Cover Photo, Courtesy of Unicef

Our cover shows two kids from  
the Sudan who are being helped  
by UNICEF.



# Tomorrow's News Today



PHOTO: VICTORIA MAERSTEN

## The Cat's Meow

Who did Steven Spielberg, the creator of E.T., model his famous character after? A brand new breed of cat that coos like a pigeon!

The cat named Shmonem is not your everyday housecat. It's completely hairless—except for tufts of hair around its nose and eyes, and at the end of its long tail which looks something like the tail of a rat.

Shmonem wags its tail from side to side—just like a dog. He has great vision and no whiskers.

Shmonem must live indoors because he has no fur. His owner thinks he's "more intelligent than an average cat."

How did Shmonem come about? His parents were ordinary devon rex parents. He is the result of a mutation—a change in the genes. Shmonem will be shown at the International Cat Show in New York City, January 24-26, 1986.

ILLUSTRATION BY JENNIFER SKOPP

## Mars Trip Planned

Will there be humans heading to Mars by the year 2010? There may be, if scientists, astronauts and politicians have their way. And the journey may be shared by two nations—the U.S. and the Soviet Union.

The mission would take off from an orbiting U.S. space station which should be built by 1992. The trip would take two to three years to reach Mars which is 35 million miles from Earth. (That's 160 times the distance to the moon.)

The space flight could cause many problems for the "Marsnauts." After spending such a long time in zero gravity, their muscles—including their hearts—could weaken. Their bones might lose calcium. And it might be difficult for a group of people living together in close quarters for years to get along. They might become bored and argue.

All these facts aren't keeping space experts from starting to plan the Mars trip. Will it ever take place? Only the future—and the stars—will tell!



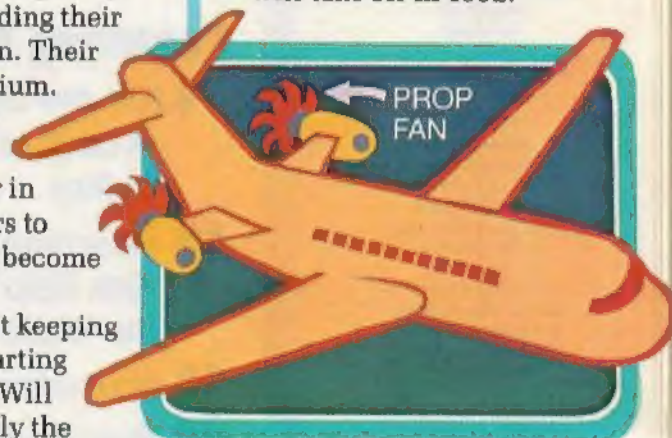
## Propeller Planes Returning

A new test plane will fly in the sky next summer and it may change the look of planes to come. The new model has engines with propellers mounted on its rear.

The new prop planes may use 30 percent less fuel than today's jets. The plane will still travel at a jet-age 550 miles per hour.

The test craft has been in the works for 10 years. Engineers still have to figure out what to do about the noise the propellers make. They are looking into ways to soundproof the cabins so passengers can ride in quiet.

If all goes well, passengers will take off in 1992.



## A Fishy Story

What do you do if you want to go fishing, but you have no bait? In some places you just walk up to a Vend-A-Bait machine, slip in a few coins and—presto!—live bait comes out.

Fishing fans have their choice of nightcrawlers, crawdads, liver and catfish bait. The machines keep the bait alive for two weeks by refrigerating it and supplying oxygen to preserve the critters.





## Builders Help Turtles

Each year, sea turtles lay their eggs in the sand of many beaches along the Florida coast. When the hatchlings come out of their shells, they head for the water—and swim away. But lights from homes along the beach have confused the baby turtles.

"Newborn turtles are attracted to light, not water," says Ross Witham, an expert on sea turtles. "In areas where there are no buildings, the brightest area is the water. That's because it reflects more light than the surrounding land."

Because the east coast of Florida has so many brightly lighted buildings along the beaches, the turtles head for them instead of the sea. Along the way, some are hit by cars. Others die from lack of water.

But now, three counties in Florida are requiring that all new beach buildings have tinted windows. This way, less light will reach the beach from the apartments. And the sea turtle, an endangered animal, will be less in danger of dying out.

## Up in Smoke

Some kids in parts of the U.S. are getting into a new craze with deadly results. They are chewing smokeless tobacco. In Texas, for instance, 55 percent of chewing tobacco users say they started before age 13.

Many kids think that using smokeless tobacco is less harmful than smoking cigarettes. But according to recent reports, the facts are very different.

Araden Christen, a dentist at Indiana University, found that mouth damage can occur "in as little as three to four months."

Smokeless tobacco can harm your gums and loosen your teeth. The stuff can also raise your blood pressure. In addition, it can slow your reaction time—and that's not good for athletes.

Right now, the Surgeon General—the "chief" doctor in the U.S.—is studying the effects of smokeless tobacco. Many medical groups are asking that the U.S. require warning labels on all pouches or cans of the stuff—similar to the warnings on cigarette packs.

PHOTO, STEVE LISS/TIME MAGAZINE



ILLUSTRATION © PAT CUMMINGS

## New Dinosaur Discovered

For years to come, scientists in Texas will be studying a pile of dinosaur bones they've recently uncovered. The skeletons appear to come from previously unknown species.

"Certain skull bones are unlike any we've ever seen," says Philip Murry, a scientist who has been studying the find. Most of the uncovered dinos were plant-eaters. They were small creatures who walked on their hind legs. The discovery should help scientists piece together how dinosaurs changed between 135 million and 65 million years ago.

## So What's New?

You tell us and you'll get a nifty CONTACT T-shirt—if we print your story. Send us any science stories that have to do with the future (which could even be next week!). Send stories to:

TNT  
P.O. Box 599  
Ridgefield, NJ 07657



PHOTO BY M. GRISTCHER/© PETER ARNOLD

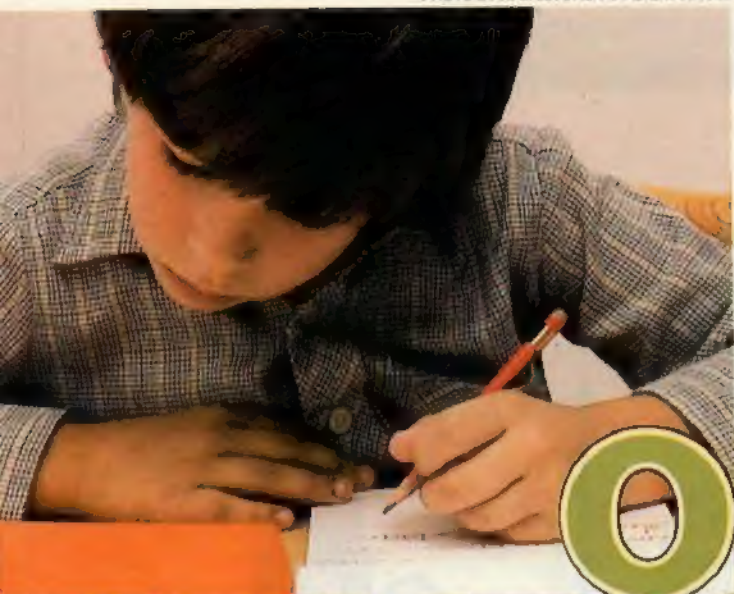


PHOTO BY PEGGY KAHANA/© PETER ARNOLD

# ON THE OTHER HAND

## A LOOK AT LIFE FOR LEFTIES

by Rosemary Iconis

Think fast. What do tennis player Martina Navratilova, actor Sylvester Stallone and Ben Franklin have in common? If you guessed left-handedness, you're right!

Only about one person out of every 10 is a lefty. Most of your friends, neighbors and family members are probably righties. Let's face it. We live in a right-handed world. We paste postage stamps on the right side of the envelope. We turn a doorknob to the right to open a door. We wind our alarm clocks to the right. The list goes on and on.

Anywhere you look, left-handedness is something rare. Believe it or not, even most plants are right-handed! The honeysuckle is one of the few climbing plants that twines to the left. Most snail shells are right-handed. Those that curve to the left are very rare.

### It's All A Matter of Drains

Why are most people right-handed? To find out, we must enter an exciting world—the world of the human brain.

If by magic you could crawl into the human

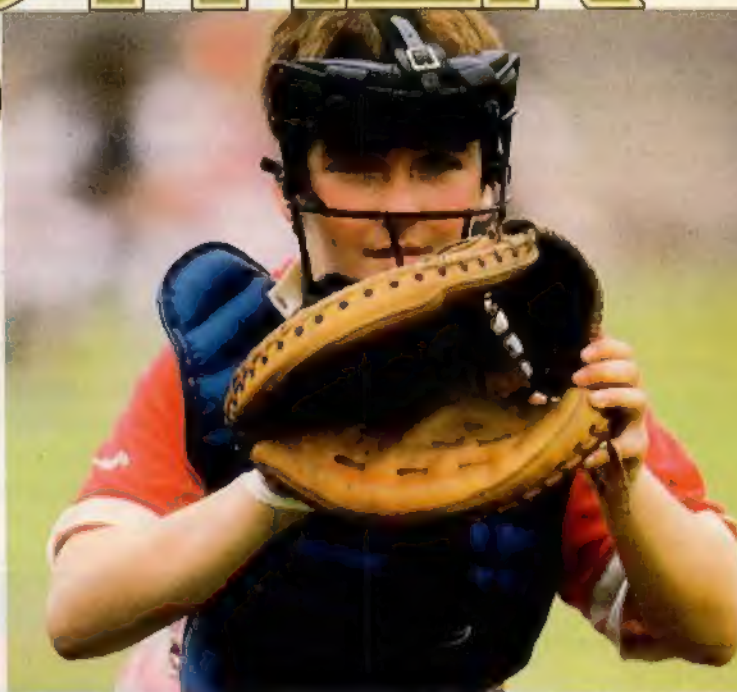


PHOTO © JIM LOEB/PHOTO RESEARCHERS, INC.



brain, you would see it is made up of two halves connected by a thick rope of nerves. Each half of the brain controls the movements of one half of the body. But it's tricky.

The nerves that lead to and from the brain are crisscrossed, so the left half of the brain controls the right side of the body. The right side of the brain controls the left side of the body. In most people, the left half of the brain is stronger, so most people are right-handed. But the right half of the brain is stronger in some people. And that means they are—you got it—left-handed.

Most scientists agree that left-handedness and right-handedness are inherited. They have found that if both parents are lefties, half of the kids will be lefties, too. But if both parents are righties, there is only a very slim chance (two out of 100) that any of the kids will be a lefty. The result: Righties far outnumber lefties.

Does that make lefties special? You bet! "I can do everything with my left hand, but I've had to learn to do a lot with my right hand too," says Keith Magni, 10, of Long Island, NY. "If you take a pair of scissors and try to use them with your left hand, they don't work. So I've learned to cut using my right hand!"

Dr. Ruben Gur, a research psychologist, might understand Keith's feelings. He says, "It's much more difficult for righties to do things with the left hand than it is for lefties to do things with the right hand. It's due to a difference in the way the nerves in their brains operate. In other words, the wiring is just not the same!"

Left-handers live in a world where common, everyday articles are made for the needs and convenience of righties.

For instance, refrigerators are usually made to be opened with the right hand. Radio tuning knobs are on the right. Scissors are made for righties, so for the lefty, the cutting edges are on the wrong side. Even watches wind the wrong way for lefties. (The winding stem is on the right.)

"Everybody says you can't write neatly if you're a lefty," says Ned Welch, 8, of Garden City, NY. "My notebook is neat but my hand is a mess after I write," adds Elizabeth Tartell, 11.

"You have to move your hand over what you've just written when you're a lefty—and your hand gets full of ink!"

## Sports Advantage

There is one place that lefties often have an advantage: sports! This is especially true in baseball. A left-handed batter is in a great position to run to first base. And first basemen very often must field balls hit to their right side. Since left-handed basemen wear the glove on the right hand, they can cover much more ground than righties who have to swing around to field balls.

Tennis is another great sport for lefties ➡

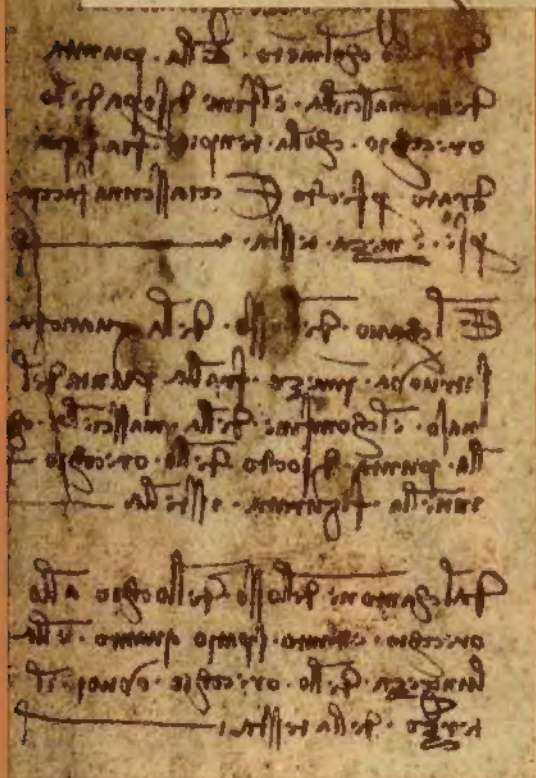
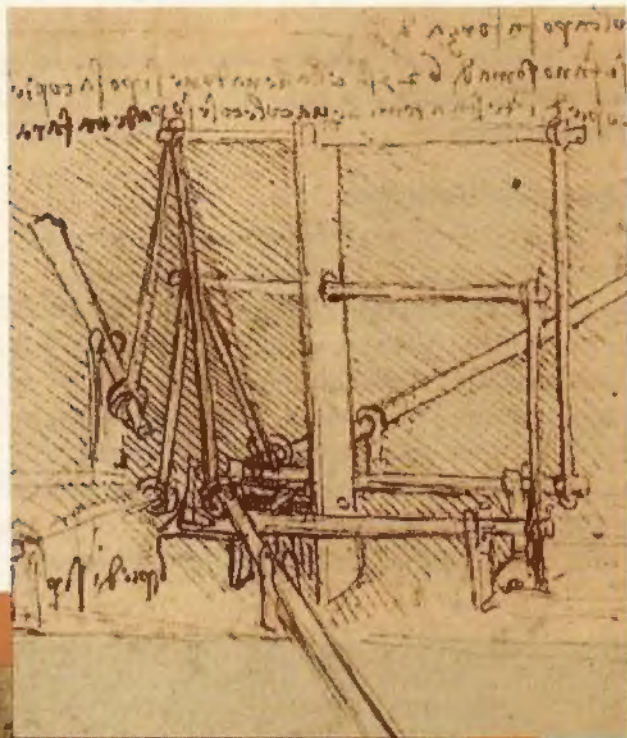
Paul McCartney uses a guitar for lefties.



© 1981 LYNN GOLDSMITH/IGI



**Below:** Artist and inventor Leonardo da Vinci used his left hand to write backwards. He thought no one could read about his secret inventions that way.



THE BETTMANN ARCHIVE

because they confuse right-handed players. A lefty is used to playing against a righty, but right-handed players don't often meet a lefty in competition. This can be very unsettling for the right-handed player who has to get used to the way the ball comes off the left-hander's racket. Maybe that is why so many of the top tennis players in the world are lefties.

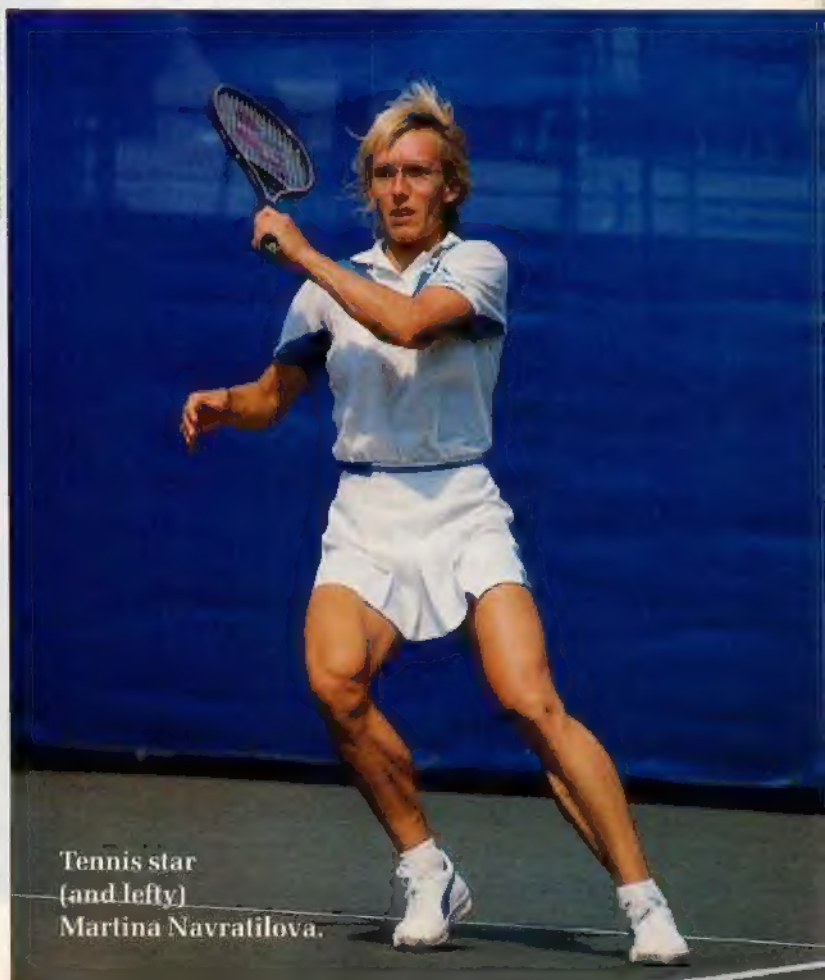
### Lefty Products

Dr. Gur estimates that 12 to 13 percent of the world's population do most things with their left hands. This figure has increased over the years, especially since the early 1900s. It's not that more lefties are being born, but fewer lefties are being trained to use their right hands.

Left-handers have come a long way. Today, kids who are left-handed are hardly ever encouraged to switch. There are also many products to help lefties get along in a right-handed world. Stores that specialize in products for lefties are springing up all over the U.S. They carry some incredible items.

Of course, lefty wristwatches are available and so are left-handed scissors. But there are also left-handed guitars and violins. Stringed

PHOTO © FOCUS ON SPORTS



Tennis star  
(and lefty)  
Martina Navratilova.





**Fernando Valenzuela:** Dodgers ace pitcher—and a lefty.

instruments are built for fingering with the left hand and bowing or strumming with the right. The lefty stores have instruments that work the opposite way.

Did you every think of a ruler as being geared toward righties? Well it is, so left-handed rulers with numbers beginning on the right side are for sale. So are special notebooks with the spirals on the right instead of the left. Lefties can even buy pens with extra-fast drying ink to avoid smudging.

### Our in Left Field

Lefties have stood out since ancient times. The Incas of South America thought left-handedness was lucky. But many superstitions make people think that right is lucky and left is—you got it—unlucky. For instance, some people think if your right eye twitches, you'll see a friend. But if your left eye twitches, you will see an enemy.

Lefties know better than to let superstitions get them down. "Since most people are right-handed, being a lefty is like having a special talent," says Ned Welch.


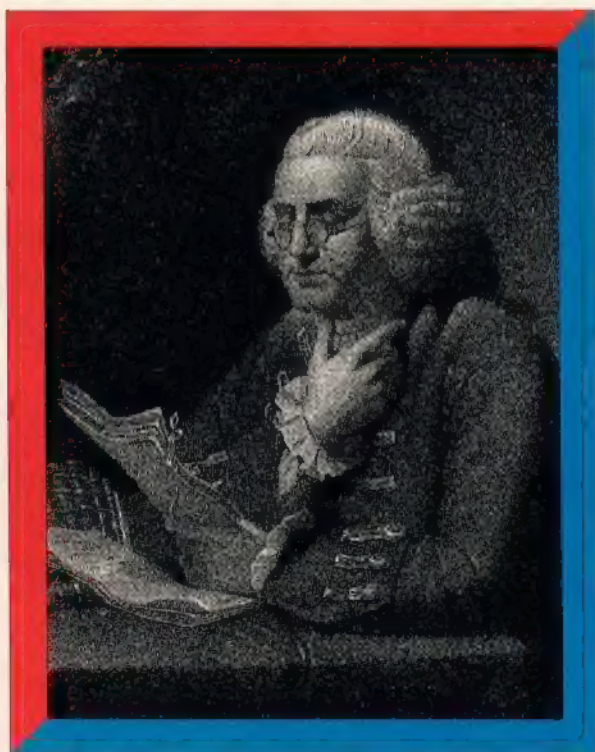
"Of course, there are a lot less of us," Ned continues. "But look out, because we're here to stay!" 

PHOTO © RICHARD PILLING/FOCUS ON SPORTS



**All American Great (and a lefty)**  
**Benjamin Franklin.**

THE BETTMANN ARCHIVE

© 1993 SCOTT ALONZO/IGI



**He's Rocky and Rambo.**  
**He's left-handed actor,**  
**Sylvester Stallone.**

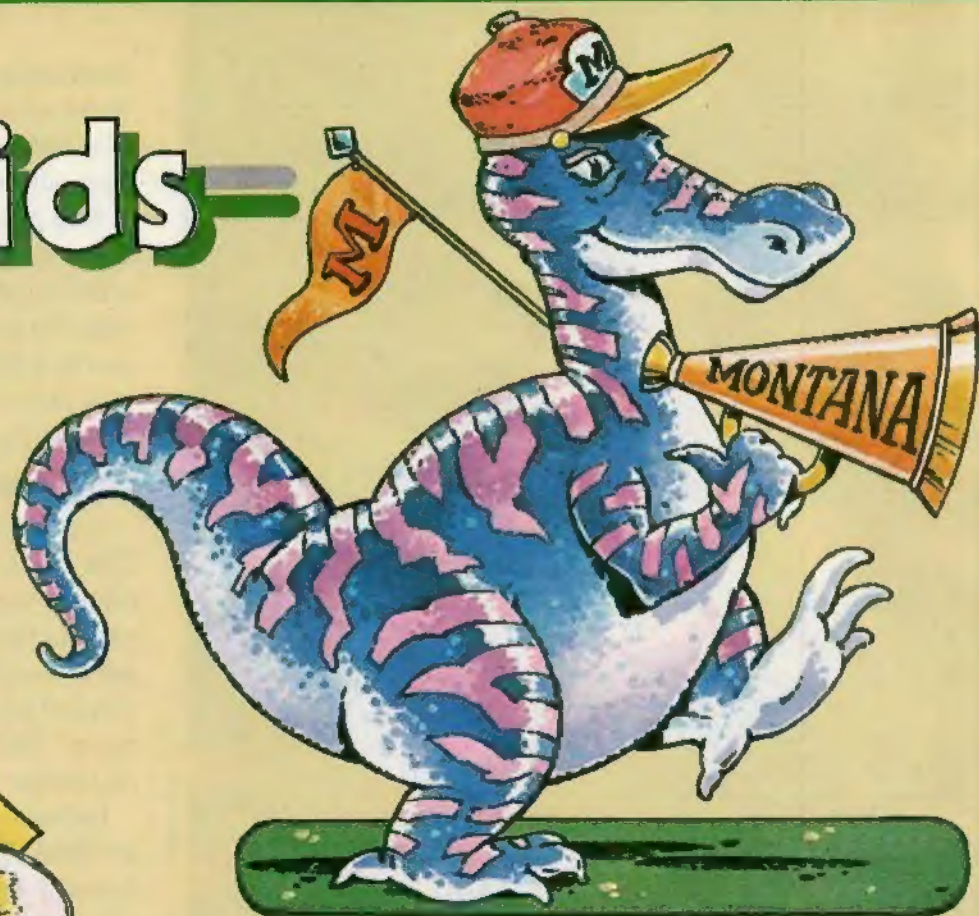


# Factoids

The average American used about five pounds of butter last year.



A favorite all-American toy, the yo-yo, was invented in the Philippines. It was brought to the U.S. in the 1920's.

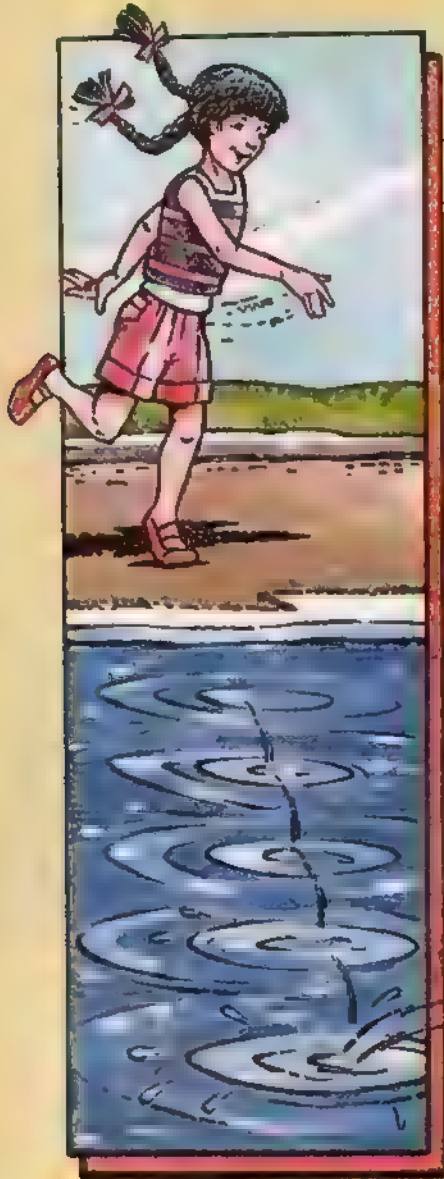


The duck-billed dinosaur is Montana's state fossil.

Last year, Americans bought one billion Valentine's day cards.



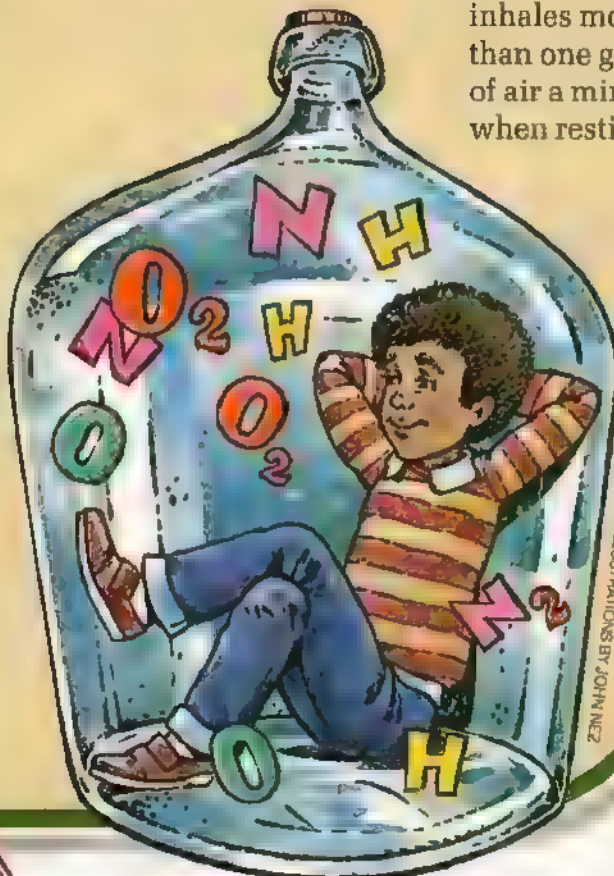
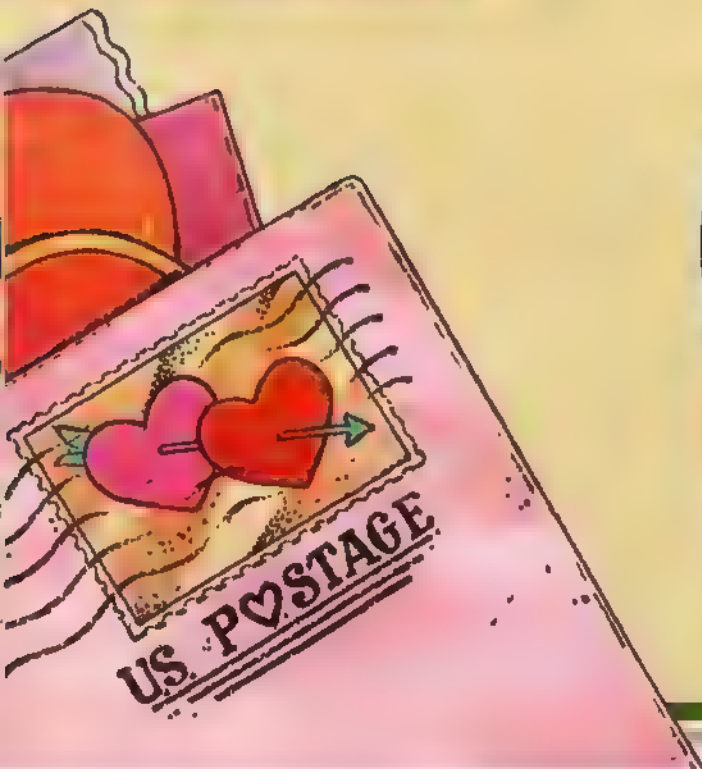




The record for skipping stones on a lake is 24 skips.



A hawk's vision is eight times sharper than a human's.



The average person inhales more than one gallon of air a minute when resting.

ILLUSTRATIONS BY JOHN NEZ





# Reaching Out

## U.S. KIDS HELP KIDS AROUND THE WORLD by Jim Lewis

Something amazing happened at Canyon Vista Middle School in Austin, Texas, and at Jerusalem Avenue Junior High in North Bellmore, New York. The students at these schools have never met each other—but suddenly they have a lot in common. They helped save lives.

"I'm just one girl in a small town," says Jennifer Nicoll, 14, of Jerusalem Avenue Junior High. "I almost can't believe that I did something that helped a whole country!"

Jennifer and thousands of other kids have helped people in Africa, South America, Indonesia, Pakistan and throughout the world.

It happened about the same time that top rock stars were singing "We Are the World" to raise millions of dollars for starving people in Africa. While music lovers were buying all those

records, some unsung heroes—students—were holding their own special money-raising events. With read-a-thons and fun runs, auctions and car washes, kids across the U.S. raised thousands of dollars to send food and medical supplies to children in Africa and other countries.

### **Saving Lives**

"Many lives have been saved thanks to American kids. But we have to keep at it," says Vincent O'Reilly. He is an official with UNICEF, the United Nations Children's Fund.

UNICEF is just one of many groups sending help to Africa. Most people know about the "Trick-or-Treat for UNICEF" Halloween drives. But UNICEF's work to help children goes on around the year—and around the world.



Since 1972, Vincent O'Reilly has traveled to many of the places where UNICEF provides this help. He has been to the Asian nations of Bangladesh, Burma, Nepal and Cambodia. Most recently, he visited the Sudan in Africa.

"We traveled by camel to see what conditions were like among the Beja Nomadic groups," Mr. O'Reilly told CONTACT. Once there he found that the lack of rain had destroyed most crops and cattle. Many of the men had gone to the city to find work. Women and children who stayed behind needed food and medical help.

But, Mr. O'Reilly adds, they needed something more. "We have to realize that this is more than just a food emergency," says Mr. O'Reilly. "It's a health emergency, too. We must take the next step in helping them."

### Steps for Health

What is the next step? It's a program called the Child Survival Revolution. UNICEF says this program could save the lives of seven million children each year in dozens of countries around the world.



**Above:** Salt, sugar and water may not be everybody's cup of tea, but they can help infants stay healthy. **Left:** "Weigh Out!" Keeping track of a child's weight is important in good health care.



PHOTOS COURTESY OF UNICEF

"The program is very important for children like the ones in the Sudan," says Mr. O'Reilly. "These children are still growing. They need special care."

The Child Survival Revolution, which begins in the village, teaches parents four ways to keep their children healthy. These steps could save the lives of 20,000 children a day.

- The first and most important part of the program is very simple. It is a method that keeps children from losing too much of the water in their bodies. Villagers receive a special mix of sugar, salt and water that was developed by doctors. This mixture is given to children who are suffering from diarrhea. It keeps them from becoming more seriously ill. The simple method has the fancy name of oral rehydration.

- The second step is to teach parents to regularly measure their son's or daughter's height and weight. The measurements then can be compared to the height and weight of other





**Above:** Most doctors agree that mother's milk is best for an infant. **Below:** One small "Ouch!" and it's on the road to good health for this girl in the Middle East. Many diseases can be prevented by lifesaving shots.



kids the same age. What if the children are too short or too light? Then parents will have an early warning that their kids are not getting the right foods to grow properly.

- The third part of the Child Survival Revolution is infant care. The program encourages breast-feeding because it is the best possible source of food during the first six months of life.

- The fourth part of the campaign is making sure kids get the right medical shots. When most kids in the U.S. are young, they get shots against measles, polio and other diseases. By making sure children in other countries get these same shots, the Child Survival Revolution can help prevent many diseases from spreading.

"The program really can save lives," says Vincent O'Reilly. But, he adds, people must understand that help is needed not just in Africa but around the world. "We have to keep caring."

The kids at Canyon Vista Middle School and Jerusalem Avenue Junior High have made a start to help save lives. And because these students care, they get something very special in return. Just ask Eric Cohen, 13, of North Bellmore, New York, or Peggy Currier, 12, of Austin, Texas.

"Hunger and sickness is a world problem," says Eric. "It made me feel very good to be able to do something."

"Helping people is the right thing to do," says Peggy. "No one in the world feels as wonderful as I do now." ☺☺



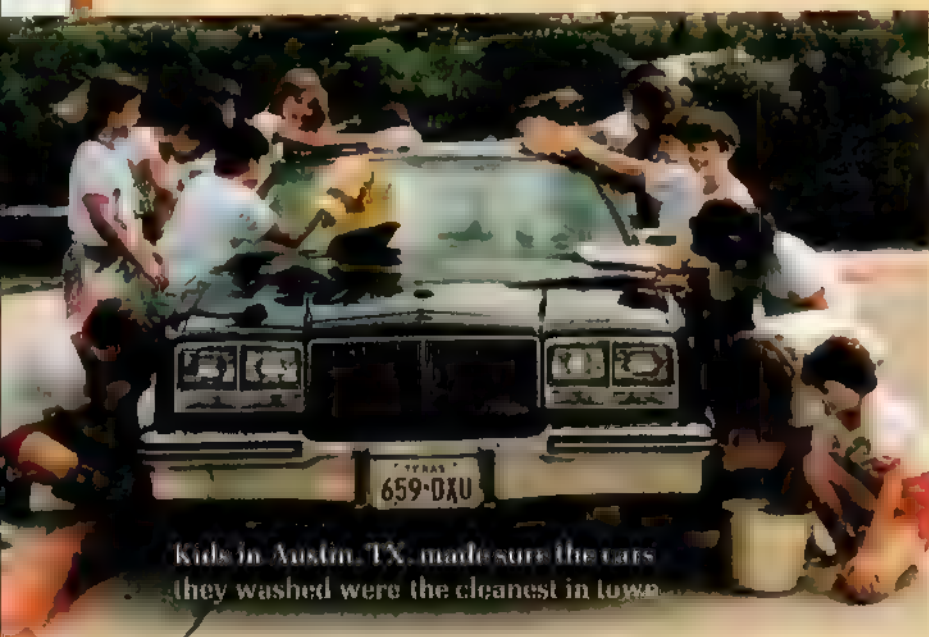
PHOTOS THIS PAGE COURTESY OF UNICEF



# How You Can Help



Students in North Bellmore, NY, made and sold *piñatas* to raise money for kids around the world.



Kids in Austin, TX, made sure the cars they washed were the cleanest in town.

"Once the kids decided they were going to do something to help the people in Africa, everyone got involved," Pat Mueller told CONTACT. Ms. Mueller is a sixth grade teacher at Canyon Vista Middle School in Austin, Texas. The students organized fun runs, auctions, car washes and other events to help to raise money.

And they weren't the only ones. Kids in many schools around the U.S. are getting involved.

These kids thought maybe you'd like to get involved, too. So they asked us to pass along some of their great money-raising ideas:

- **Spare-a-bite** Kids at Berkely Carroll Street School in Brooklyn, New York, skipped junk food and donated their snack money. At some schools, students even got local businesses to match the amount of money raised this way.

- **Mile of Pennies** One school in New York

City got students to donate spare pennies. Their goal: to get a whole mile of pennies! That's 84,800 pennies (or \$848).

- **Auction** At the Jerusalem Avenue Junior High, students made *piñatas*. On parents' night, they auctioned the *piñatas* to the highest bidder. Any kind of craft could be auctioned this way.

- **Rent-A-Kid** Mowing the lawn, washing windows, and vacuuming may not be your idea of a wonderful job. But the work seemed easy and

fun for the Canyon Vista kids when they sent the money they earned to help other kids.

- **Anything-a-thon** Have a bike-a-thon, read-a-thon, dance-a-thon or any other kind of "thon" you can think of. You can get people to donate money for every mile you bike, book you read, or hour you dance.

- **Fun Run** This was a big hit in Austin, Texas. Students, teachers, parents—everyone—paid to enter the race, then got a T-shirt for finishing.

## For More Information

For more ideas on how to help, write to:

**Group Programs/3-2-1**  
**The U.S. Committee for UNICEF**  
 331 East 38th Street  
 New York, NY 10016



# THE BLOODHOUND GANG

## The Case of the Phony Fisherman

ILLUSTRATION BY BOB PEPPER

by Michael Dayton



**W Brrr—** Only a refrigerator should be out on a day like this," complained Skip as the Bloodhound Gang trudged across the ice of Lake Frostfree.

Today was the last day of the Lake Frostfree Ice Fishing Contest. The judge of the contest was Mack Arrol, the world famous fisherman.

This morning, Mack had phoned with an urgent plea. Something was wrong at this year's tournament, he had said. Would the Bloodhound Gang help him?

The Gang found Mack at the judge's booth, a small cabin on the steep bank of Lake Frostfree.

"Mack, you have a case for us?" Vikki asked.

"You bet I do," he replied. "Something's fishy around here, and it's not just what people are catching," Mack said.

"In the junior division, the biggest fish wins first prize, a motorized fishing boat," Mack explained. "Three contestants are still in the running—Rose Ann Black, Murphy Sluggs and Joey Thurber."

"Tell us about them," Vikki said.

Murphy Sluggs was always bragging, Mack told them. Still, he was a likeable fellow—until he began one of his fishing stories, which were usually longer than a Moray eel.

Joey Thurber cast a scientific eye on fishing. Joey believed that he could crack the mysteries of fishing scientifically. He surrounded him-

self with all the latest scientific gear, weather gauges, electric socks, thermometers and graphite fishing poles.

Mack did not know much about Rose Ann Black. She seemed to be a good fisherman, but she was a loner. She usually fished by herself in some quiet corner of the lake.

"Yesterday Rose Ann and Murphy each caught a bass weighing seven pounds," Mack said. "Joey Thurber hasn't caught anything yet. Somehow, though, he always manages to pull it out of his hat, if you know what I mean."

"Do you think he cheated?" Ricardo asked.

"I don't know," Mack admitted. "But today Murphy and Rose Ann reported some suspicious acts."

Mack said that Rose Ann's line had been cut twice. Murphy claimed that a large bass was lifted from his bucket while he ate lunch.

## On the Ice

"Did anything happen to Joey?" asked Skip.

"Nothing really," Mack said.

"I say it's time we go meet our freezing fishermen and women," Vikki said.

Ice fishing is a lonely sport. Fishermen cut



through the ice using saws, and many set up their lines on a small tripod. A small flag pops up on the tripod when a fish is hooked. Then the fishermen patiently wait, huddling in small, simple huts that they build near their lines.

At least, that's how most ice fishermen operate. However, Joey's shed looked like a scientific outpost. Weather instruments whirled on the roof of the aluminum shed. Joey was inside, checking readings on a portable sonar.

"How's the fishing?" Vikki asked.

"I haven't put my line in the water yet," he said, turning his attention to a thermometer. "You see, the water temperature is not right, and the air has too much water moisture in it. And besides..." He paused and looked at them.

"And besides what?" Ricardo asked.

"And besides, I forgot my bait today," he said with a frown.

"I don't suppose you know anything about some cut fishing lines," Vikki said.

Joey gave her an odd look. "No, it doesn't mention that in any of my books. But don't you worry. With all this equipment, I'm sure to catch the biggest fish. You can bet on it."

"Hmm, I'm sure," Vikki replied. "Good luck."

"Thanks," he said, turning back to his thermometer.

Vikki, Skip and Ricardo left.

"What do you think?" Ricardo asked.

"I think we should keep an eye on him," Vikki said. "Skip, you stay here and watch him. I'll go have a chat with Murphy. Ricardo, why don't you go check out Rose Ann?"

Ricardo walked toward Rose Ann's small lean-to. It was located on a cove far back from the other fishermen. As he neared it, he froze dead in his tracks. Before him stood Rose Ann. She looked angry. And she was waving a large, shiny knife.

## **K**nife on the Water

"Don't do it!" Ricardo screamed, ducking his head.

"Relax, I'm not going to hurt you," the girl said. "I've just about had it, that's all. This is the third time today that someone has cut my line."

"Are you Rose Ann Black?" Ricardo asked.

"That's right," Rose Ann said. "I went inside my shelter for a second to get out of the wind.

When I came back out, one of my lines had been cut. I found this knife lying next to my reel," she said, handing the knife to Ricardo.

"I know it's either Murphy or Joey who is doing this," she continued. "I'm going to report them to Mack and have them disqualified. Will you watch my other line while I'm gone?"

"You bet I will," Ricardo said.

Ricardo walked to her hut. When he got there he noticed the flag had popped on her line. That meant that a fish was on the hook.

He hesitated for a second, then grabbed the rod and began fumbling with the reel. He had fished many times before, but had never seen a reel like this before. The crank was on the wrong side.

"Help! Rose Ann!" he yelled. "You've got a whale on this line!"

Rose Ann turned and ran toward him. He also saw Vikki running in his direction.

Vikki and Rose Ann arrived at the same time.



Rose Ann grabbed the rod from him and pulled the fish through the ice. The fish seemed almost lifeless. Rose Ann quickly unhooked it and placed it in a cooler.

"That thing's as big as a Buick!" Ricardo exclaimed. "You're sure to win the contest."

"Murphy just caught a big fish, too," Vikki said. "But it wasn't nearly this big."

"She was lucky to catch this at all," Ricardo said. "Just five minutes ago, someone cut her line with this knife."

He handed the knife to Vikki. She looked at it carefully, and glanced at Rose Ann. "We'd better report this to Mack and weigh that ➔





fish of yours."

"What did you find out from Murphy?" Ricardo whispered to Vikki as they walked to the judging stand.

"That guy could bend an ear of corn with all his talking," Vikki said. "But when it comes to fishing, he seems to know his stuff. I didn't notice anything suspicious."

## Follow That Carp!

When they reached the judging station, Murphy was there with his latest catch. The scale tipped at 9½ pounds.

"I knew it, I knew it," Murphy beamed. "Of course it's not nearly as big as the one that got away. I was standing..."

"Please, Murphy, spare us," moaned Mack. "Rose Ann, let's see what you caught."

Rose Ann placed her fish on the scale. The scale swung to 13 pounds. Mack let out a whistle. For once, Murphy had nothing to say.

"That's almost a record for this lake," Mack said. "I haven't seen a bass this big come out of Lake Frostfree in a long time."

Mack studied the fish closely. A puzzled look crossed his face.

"In fact, this fish didn't come from this lake at all. This is a striped bass. There are no striped bass in this lake."

"What?" exclaimed Ricardo. "But I helped her reel it in."

"You might have helped reel it in, but someone brought this fish from the ocean," Mack said.

"How could a salt water fish stay alive in fresh water?" Vikki asked.

"That's easy," Mack said. "Striped bass spawn each year in fresh water. So being in fresh water for a while wouldn't harm it. And the ocean's only 10 miles away from here."

Rose Ann became angry. "Someone must have

put that fish on my line to have me disqualified," she said. "It must have been the same person who cut my line with this knife—either Murphy or that nut Joey."

Now Vikki stepped up. "You're right, Rose Ann," she said. "But that person happens to be you."

"Me?" Rose Ann said.

"Mack, look closely at this knife," Vikki said, handing it to Mack. "You'll notice it's a left-handed knife. The sharp side is on the opposite side from the knives that most people use. I also noticed that Rose Ann has the only reel set up for a left-handed person. That's why you had trouble reeling in that fish, Ricardo."

Rose Ann hung her head in shame. "Okay, I admit it. Y-you see, I'm tired of never winning a fishing contest. And I'm sick of all the boys telling me I'm a lousy fisherman. I decided to show them once and for all."

"That means I've won!" Murphy shouted. At that moment, Skip and Joey Thurber arrived. Joey was hauling a fish on a rope. He plopped it on the scale. The scale tipped 11 pounds.

Murphy groaned. He had lost.

"How did you catch it?" Murphy asked.

"I used pure science," declared Joey.

"That's right, I saw him," Skip said. "When the temperature was right, and the wind was right, Joey put his line in the water. He snagged an old boot and reeled it in. The fish was inside!"

"I guess that makes it some variety of sole," Vikki said.

"You stole my line," laughed Skip. ☺

**Watch for next month's  
Bloodhound Gang  
mystery!**



ILLUSTRATION BY DAVE BLAND



# CAN WE TALK?



## You Bet We Can!

**Announcing The VOICE MESSENGER and EASY SPEECH For The Commodore 64 and 128.**

### A TALKING COMPUTER?

Ever ask yourself "If only my computer could talk to me?" Well... thanks to Welwyn/Currah, it can with the new, exciting VOICE MESSENGER™ speech synthesizer and accompanying EASY SPEECH™ text-to-speech system.

### TALK TO ME

By simply plugging in the VOICE MESSENGER to your Commodore 64™ and 128™ home computer, it will say anything you want, letter by letter, in words, sentences, or in conversational or story form.

### SOUNDS GOOD

Unlike other types of synthesizers the VOICE MESSENGER and EASY SPEECH system has an allophone speech synthesizer that makes computer speech intelligible with an unlimited vocabulary that will speak to you clearly and understandably. Its text-to-speech converts your typed copy into conversational dialog at the touch of the keyboard.



### NOT JUST ALL TALK

Welwyn/Currah along with Rist, Inc. are without a doubt the most innovative developers of computer speech technology. The VOICE MESSENGER and EASY SPEECH system was designed for all possible applications: educational, entertainment, business and home utility. And can immediately be put into use with most dedicated, menu-driven and pre-existing software including: Infocom's™ "Adventure Series", the CBS™ "Success with Math" educational series, and many, many more.

### TALK IS CHEAP! (Inexpensive, anyway)

The VOICE MESSENGER and EASY SPEECH system is available at a suggested combination retail price of under \$70.00, or may be purchased separately.

To find out how you can turn your Commodore 64 or 128 computer into a talking computer, or to locate a store location nearest you call: (313) 547-8300; or write: Welwyn/Currah, 104 West Fourth Street, Suite 208-9, Royal Oak, Michigan 48067

**Welwyn**

CURRAH



Commodore 64 & 128 are trademarks of Commodore, Inc. Infocom is a trademark of Infocom, Inc. Voice Messenger & Easy Speech are trademarks of Welwyn/Currah & Rist, Inc. CBS is a trademark of CBS Software

© 1985 Welwyn/Currah. All Rights Reserved



# Shunter-Bug!

by Richard Chevat

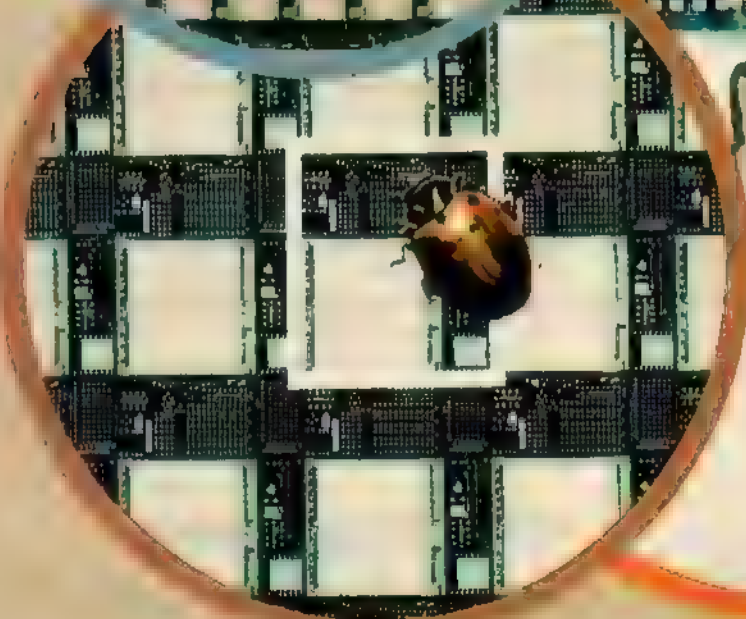
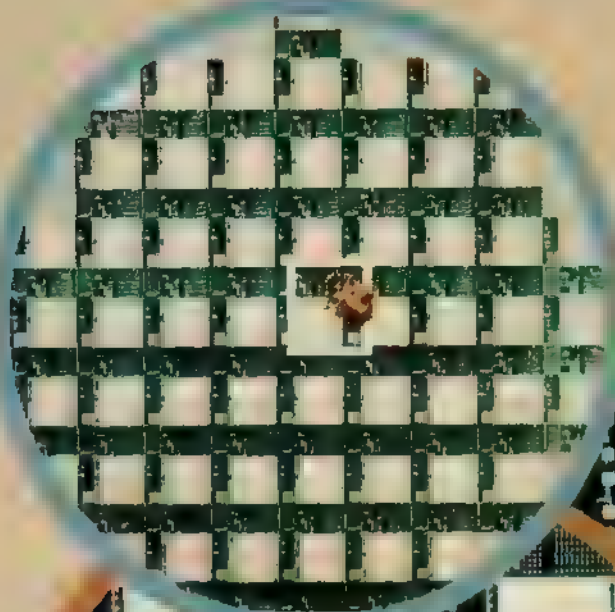
It came from beyond the backyard! It crawled over anything in its path! The only way to stop it was to freeze it! It was—The Invasion of the Ladybug!!!

It sounds like a monster movie, but it happened at a photo studio in Dallas, Texas. It all started when the engineers at Texas Instruments wanted to show how small a microchip is.

Texas Instruments is the company that invented the semiconductor—the electronic marvel that makes microchips possible. Without the microchip, microcomputers, hand calculators, and dozens of other products wouldn't exist.

But when the folks at Texas Instruments wanted to show how small a chip is, they needed a little help. And what could be smaller than your friendly neighborhood ladybug. So they decided to place a bug in each photo. That would show just how tiny the chips are.

But there were some—um—"bugs" in their plans. First, the photographers had to get ladybugs in the middle of winter. They had to order them from California, and the smallest number





they could buy was 250!

Then they had another problem—how do you get a ladybug to sit in one place long enough to take a photo? You don't. Every time the photographer got ready to shoot a picture, the ladybug model would crawl away. Finally, the engineers found a real cool solution to the problem. They froze the ladybug!

The first four photos were made with a regular camera and lens. To make the last two, the photographer had to use a special kind of microscope called an electron scanning microscope.

In the first photo, you can see the ladybug life-size. It is sitting on a silicon wafer. Each of the white squares on the wafer is one chip. Each chip will hold over 64,000 bits of information in a computer's memory.

The fourth photo shows the chip 45 times life-size. Do you notice the rows of brown dots under the ladybug's leg? They are the computer's memory cells. Each can hold an electric charge. That's how a computer stores information.

In the last photo, you can see how really tiny the conductors on a chip are. They're smaller than the hair on a ladybug's leg! This photo is 3,600 times life size! The curved objects are the hairs on the ladybug's leg. The thick yellow lines are the chip's conductors. They act like wires and carry the signals through the chip. Each conductor is only 2.7 microns wide. That's about 100 millionths of an inch!

No wonder they call them microchips! So if someone should ever bug you with a question about how small a chip is, you'll know the answer—thanks to the ladybug.

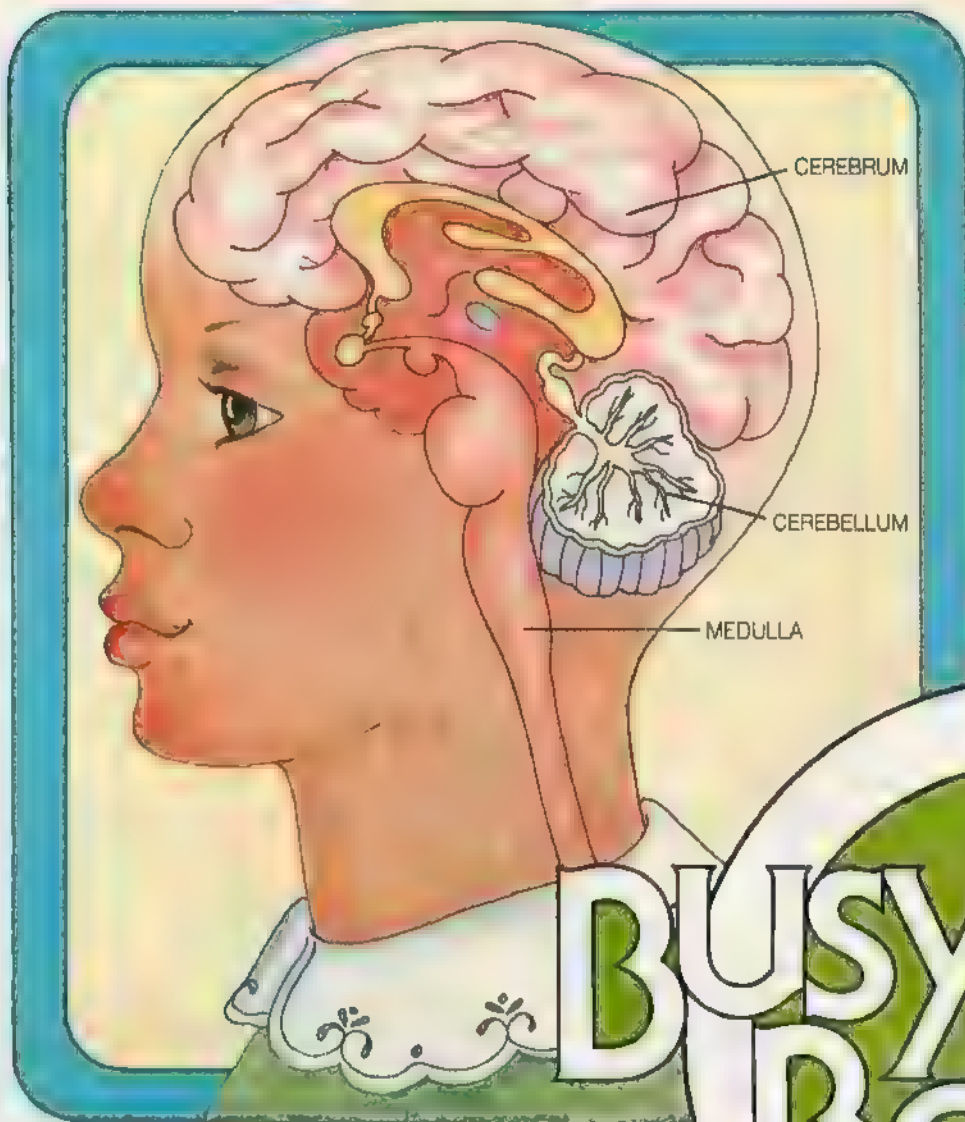




# The Brain

Behind your forehead and between your ears you find. . . your brain! From seven months before you're born to the day you die, the cells in your brain are hard at work.

The brain is the control room for everything you do. Want to take a walk? You need your brain. Remember to breathe in? Gotta have a brain. Read? Cry? Without your brain, you couldn't do anything.



## Meet Your Brain

The day you're born, your brain weighs about 12 ounces. By the time you're an adult, it's up to three pounds. How does something only three pounds heavy get all those different jobs done? By specializing. The different parts of your brain are always working together. But each also does its own, very specialized, things.

The cerebrum (seh-REE-brum), the biggest part of all, is your think tank. It's the top and front part of your brain. The cerebrum is wrinkly and gray, the part most people think of as "the brain." It is also divided into a right and left part, called, sensibly, the right and left halves. (You can find out more about this on the next page.)

In the cerebrum, you put thoughts together, make up ideas, and make sense of what other people tell you. You're using your cerebrum right now to read this sentence.

The cerebellum (seh-ruh-BELL-um) is your information bank. It is located at the back of your head. A lot like a computer, the cerebellum stores information about all the things you've

learned. Then you can do them in a second. That's why you don't have to think, "Okay, I move my right foot, then my left, then my right" —you say, "I'm going for a walk." The cerebellum takes care of things like eating, reading, tying your shoes and playing the guitar.

The medulla (meh-DULL-uh) is your automatic pilot. This small part is found right next to where your spinal cord enters the brain. It works on the things you did without ever learning. It keeps you breathing, swallowing, even sneezing. It makes sure your food gets digested and keeps your heart beating around the clock.

## Get the Message?

Inside your brain are over 10 billion cells. (Yikes!) Each cell has hundreds of branches which lead to branches of other cells. Messages travel on these branches to different parts of your brain. It's something like the way electricity moves along wires.



dies

As a message gets close to the end of one cell branch, it finds itself at a tiny empty space. This is called a synapse (SIN-aps). To get to the new branch, the message must jump over the synapse and land on the other side. This happens billions of times a day, without your being aware of it.

Information comes into the brain and actions are sent out. How? That all depends. There are special nerves bringing information to the brain. They tell you when it's cold out, when your cat is rubbing against you, or when your ribs are being tickled. They are called *sensory nerves*. Other kinds of nerves handle action. They send orders from the brain back to the body. They command you to shiver, pet your cat, or giggle like a fool. These ordering nerves are called *motor nerves*.

### Left, Right, Left, Right

Remember we said the cerebrum is divided into halves, the right and the left? Well, in the last few years, scientists have discovered that each side does something different.

One side of the brain is usually a little stronger—which is why people are left-handed or right-handed. Some scientists now believe the left brain handles the way you talk and other word skills like reading. The right side seems to be concerned with other things, including music and art talent.

How did we find this out? Doctors noticed that when someone had an injury on only one side of the cerebrum, she would only lose some of her abilities. For example, a person whose left brain was hurt couldn't talk well, but could recognize friends and hear music.

What does it mean? Scientists aren't sure. But they're doing research on it to find more answers.

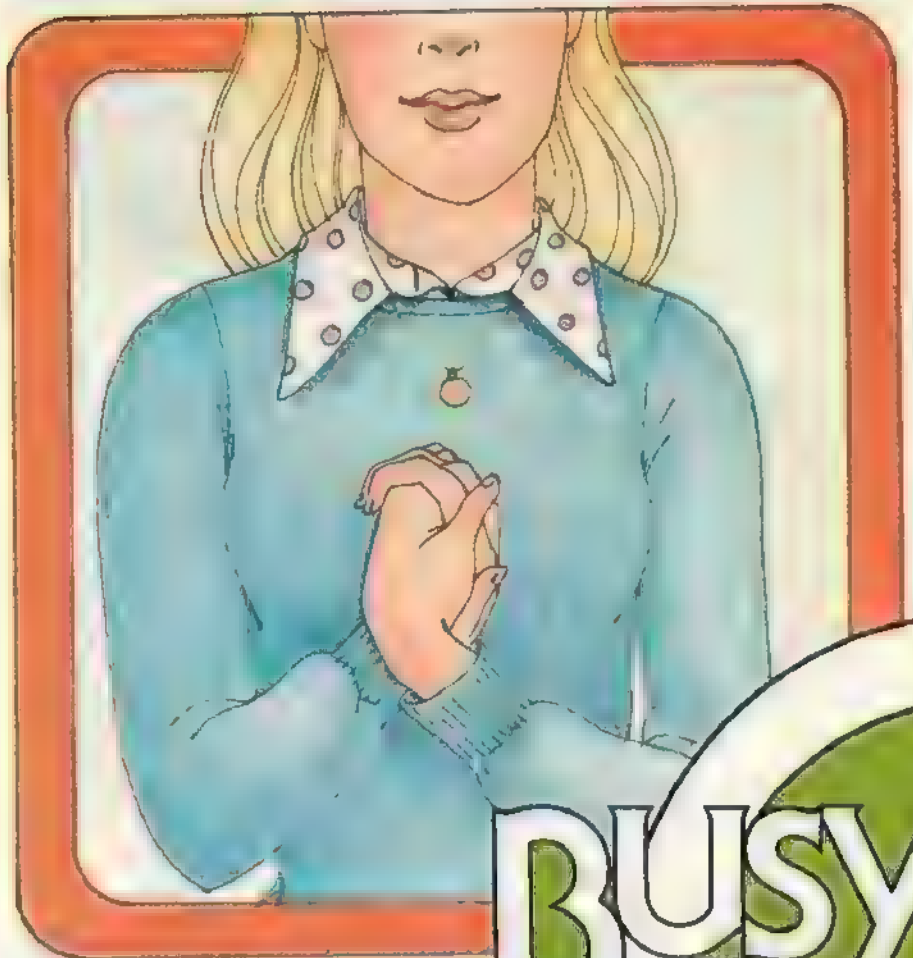


## Brain Teaser #1

Have a friend hold her arms out straight, with the back of the hands touching. Then put her right hand over her left and have her clasp fingers. Then bring her clasped hands towards her until they look like the picture at right.

Now point (Don't touch!) to one of your friend's fingers and ask her to move or wiggle it. Point to several. Did she get any of them right, or did she keep moving the wrong fingers? Now have her try it on you.

It looks simple, right? But it can be difficult because your brain is not sure what's going on. It's hard to tell which finger is which. With practice, your friend will guess right, but the first few times her brain will be boggled.



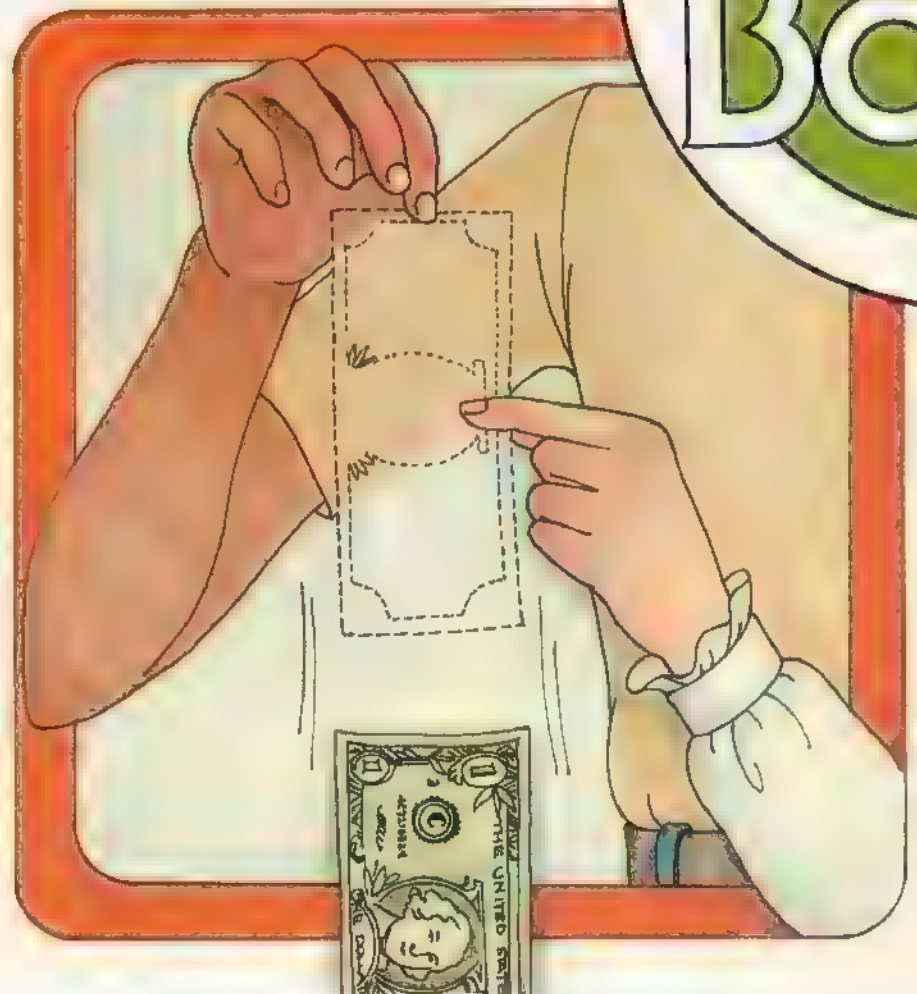
BUSY BO

## Brain Teaser #2

The brain does everything so fast you might think it doesn't even pause. But all information has to get there before you do something, and that takes time, no matter how little it is. Try this experiment on a friend, and you'll see what we mean.

Hold a dollar bill the long way between your friend's thumb and second finger. Make sure his hand is around the middle of the dollar. Tell him you are going to drop the dollar. Say that when you do, he's got to grab it. Without saying when, drop the dollar. Did he catch the bill before it fell to the floor?

It takes time for your friend to see you drop the bill, and more time for him to grab it. In those moments, the message goes from his eyes to his brain. Then the brain sends a message back to his hand: "GRAB IT!" If your friend is like most people, he won't be quite fast enough.







ILLUSTRATIONS © SUSAN GRAY

dies

## Smarts

What does your brain have to do with smarts? Believe it or not, after hundreds of years of study, no one really knows. Some people are "smart" in math,

but the pits in English. The brain is the key to intelligence, but no one's been able to figure out exactly what makes people smart and smarter.

Scientists do know that the weight and size of the human brain don't have anything to do with smarts. Some scientists think it's the number of synapses (remember? the spaces between brain cell branches) a person has that makes her smart. Others think it may be the speed with which a person makes connections. But it's still a mystery for now.

## Smart Kids

Some kids at a very early age are able to do things normal kids twice as old can't do. These kids are called prodigies (PROD-dih-jees). Some play advanced games of chess at age six. Others write music or solve math problems normally done only by smart adults.

Wolfgang Mozart is probably the most famous child prodigy. He lived in Europe in the 1700s. By the time he was three, little Wolfgang could play three instruments. He wrote very complex music before he was five. At age six, he was giving concerts all over Europe!

There are modern-day prodigies, too. Former chess champion Bobby Fischer was one of the world's best players by the time he was 12.

## Dumb Kid

Not all geniuses start out as geniuses. Ever hear of Albert Einstein? Albert was a real problem as a kid. He didn't speak until he was three years old. He didn't say very much even up to age nine. His parents were afraid for a while that he might even be retarded, or a "slow" child. He was very shy. So who would have thought that he'd some day be one of the world's greatest geniuses?

When Einstein died in 1955, many people thought the answer to his genius might be in his brain. So it was taken from his body and studied by scientists. Though many tests have been done on it, no one has discovered anything unusual about it. It may be that the secret of his genius can't be found in his brain.

—Written by Rae Paige



# Dinner Is Served

by Ellen Weiss

Everybody in the world does not eat cheeseburgers. Generally, people eat what they can find where they live. For instance:

**Kangaroo** Food is difficult to come by for the Aborigines of Australia. When a kangaroo is caught, it's time to celebrate. The kangaroo is thrown whole into a roasting-pit while everyone stands around and waits. After the kangaroo has been cooked a little, the feast begins.



**Wild Animals** When big game was more plentiful in Africa, marrow from the bones of giraffes was one of the most prized delicacies. Another lovely dish was hippo lard (or fat), which is supposed to be sweet enough to eat raw.



**Iguanas** An iguana is a large lizard found in the tropics of North and South America. It lives in trees and is three to six feet long. Iguanas are sold live in the markets of South America. The back is supposed to be the best part. Some people say it tastes like chicken.



**Fugu** If you like to live dangerously, you can go to Japan and try some fugu. This is a kind of blowfish which has a deadly poison in parts of its body. It's supposed to taste great, and millions of people try it each year. Their fugu must be cleaned and prepared by cooks with a special license. Even so, 200 people die every year.





**Snails and Roses** In France, a country known the world over for its great cooking, a favorite dish is snails. They are served in their shells with butter and garlic. And in the same meal with your snails, you might be served candied flowers for dessert.



**Eggs** In China, Thousand Year Eggs are a great treat before a meal. They are usually raw duck eggs which are buried in a special kind of clay—not for a thousand years, but for about eight weeks. When they are dug up, the outsides are black. The insides should be bright blue and green, and firm. They taste slightly fishy.



**Insects** Insects live almost everywhere, and can provide a lot of nourishment. In South-east Asia, one can find red ant soup. In some countries, people eat locusts. In Kenya, Africa, children collect flying termites after it rains. They eat some and stuff the rest into tin cans.



**Alligators** A few years ago, the American alligator was an endangered animal. Now the meat of these cuddly creatures is turning up on the menus of fancy restaurants in certain parts of the United States. Alligators are raised on farms. Their meat is low on fat and supposed to taste like our old friend, the chicken.





# Any Questions?

by Renée Skelton

**Who invented robots?** A robot is a machine that can imitate human actions and do work that used to be done by people. Nowadays, robots work in factories, offices and homes.

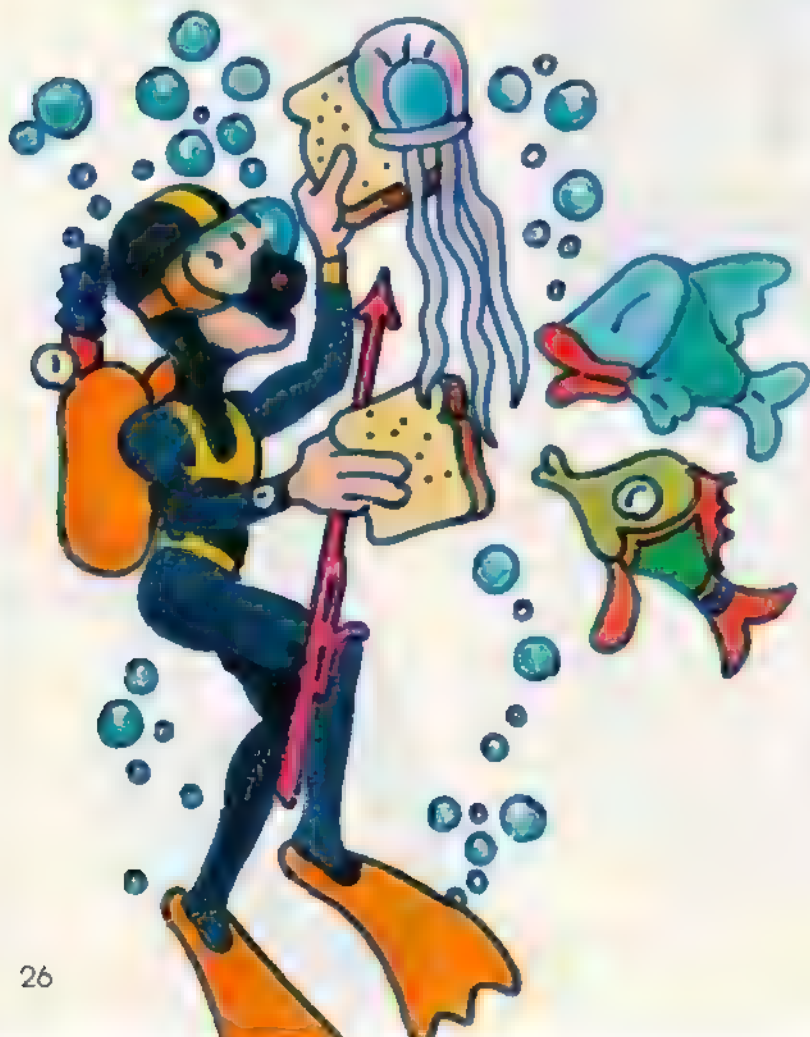
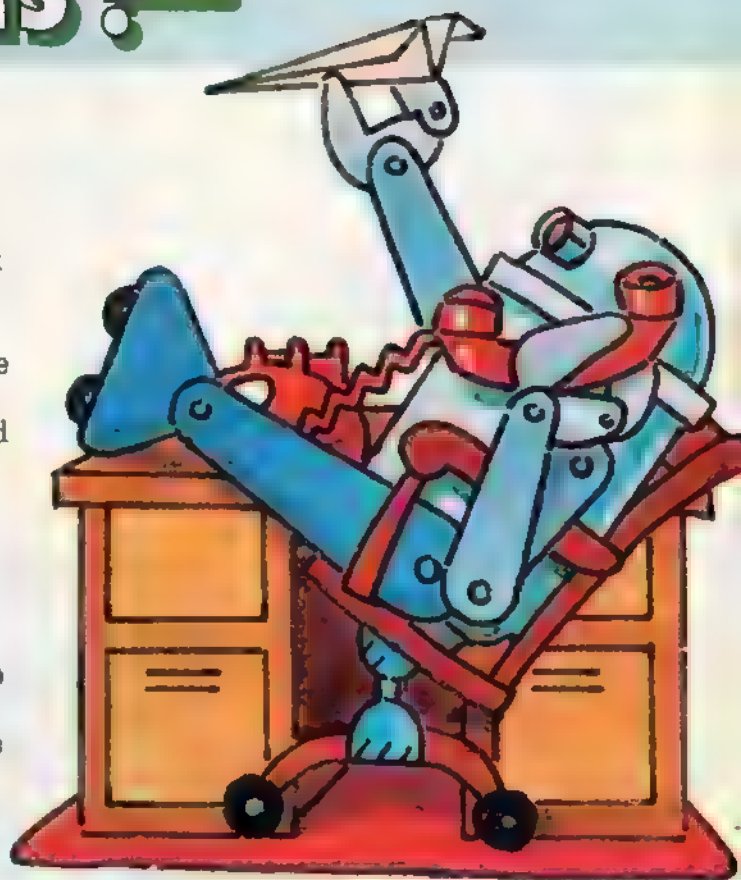
Lots of people helped to invent all the parts that are used to build modern robots. But the people responsible for putting it all together are Joe Engleberger and George Duval.

Engleberger is often called the "father of robotics." He grew up reading all the science fiction he could find. Engleberger's favorite character was always the robot.

Engleberger was working on a design for a robot when he met Duval. Duval was another scientist who had already designed a robot. They started working together and have built most of the robots used in the U.S. today.

Question sent in by Tom Martin, New York, NY.

Written by Cynthia Jabs



**Do jellyfish really have jelly in them?** No way. The kind of jelly you put on sandwiches is made from fruits and sugar. You won't find either of those ingredients in a jellyfish. They're called jellyfish because they look like big blobs of jelly as they float in the water.

Jellyfish are unusual sea creatures. The main part of their body (the bell) is a clear, soft ball that is shaped like an open umbrella. Underneath, jellyfish have several long tentacles with poison stingers.

Most of the jellyfish you might run into at the beach are only a few inches wide. But some kinds can grow to be huge. The Portuguese man o' war is the biggest of all jellyfish. It has a bell that can be six feet wide. And its tentacles can reach 120 feet in length. That's one jellyfish that sure isn't sweet.

Question sent in by Jacinta Wells, Jackson, MS.



Do you have a question that no one seems able to answer? Why not ask us? Send your question, along with your name, address, and age, to:

Any Questions?  
3-2-1 CONTACT  
P.O. Box 599  
Ridgefield, NJ 07657

**What are calories?** A calorie measures heat energy. That's the energy that comes from burning up the food you eat.

Your body releases energy from food to keep you going. The amount of energy your body has available depends on the amount of calories in the food you eat. A high-calorie piece of fried chicken will supply more energy to your body than a low-calorie stick of celery.

The amount of calories in the food you eat can be a weighty problem. Your body needs a certain amount of food energy to keep you going. If you don't eat enough food calories to give your body the fuel it needs, your body steals the fuel from itself. It burns away your fat and you get thinner.

But if you put in more food calories than your body can use each day, your body stores away the extra as fat. And too much fat isn't a good thing!

Question sent in by Christi Mays, Goldthwaite, TX.



## How much is the human body worth?

Your priceless body is actually a bargain. Your body has about 20 different chemicals in it. For instance, there's enough iron to make a one-inch nail. But chemically speaking, you're pretty ordinary.

About two-thirds of your weight is water. So your body contains lots of hydrogen and oxygen. There are also elements like carbon, nitrogen, calcium and phosphorus, among others.

All of these chemicals make up your living cells. These cells are the building blocks of your body. Some cells have more of some elements, less of others. Red blood cells have lots of iron. But bone cells are bigger on calcium.

If you were to buy chemicals similar to those that make up your body, you probably wouldn't even need a dollar. But don't worry. You may be cheap stuff chemically, but to your family and friends—you're worth a lot!

Question sent in by Kerry Burke, Rochester, NY.



# Extra!

Ready for more excitement from around the world? Then here's a special EXTRA! just for you.

## Have a Ball!

Children all over the world love to play games with balls. In Afghanistan—a nation in Asia—kids play a game called “Doorkeeper.” All you need to play is a rubber ball and a group of kids.

### How you play:

Players should stand in a circle with their legs spread apart and their feet touching their neighbors' feet. One player stands in the middle of the circle and must roll the ball through the legs of one of the players in the circle. That player tries to stop the ball by quickly moving his feet together. If the ball sneaks through, the player in the outer circle is out. The last one left is the winner. “Doorkeeper” is an a-door-able game!



## Fantastic Figures

Want to try your hand at some fancy artwork? Try this: Draw a figure in one continuous line. (We've drawn one to get you started.) You can't pick up the pen at all and you're not allowed to trace over the same line again. You just might have more trouble than you think “figuring” out these figures.

ILLUSTRATIONS BY MICHAEL DONATO





## Write Away

Now's your chance to make a friend in another country. For a list of groups that will help you get in touch with a pen pal, just send a stamped, self-addressed envelope to:

**Information Center on**

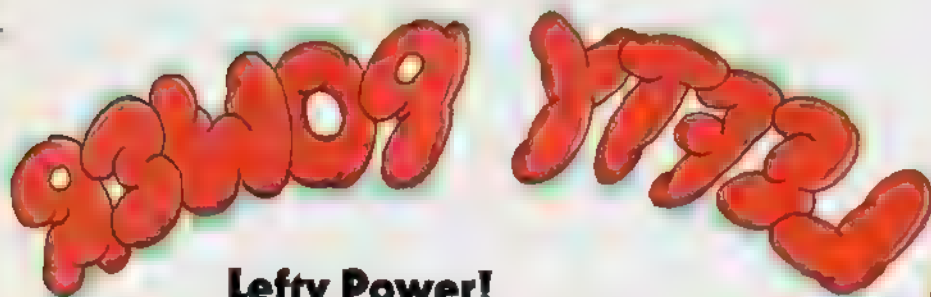
**Children's Cultures**

**U.S. Committee for UNICEF**

**331 E. 38th St.**

**New York, NY 10016**

Be sure to send a note asking for their pen pal list.



## Lefty Power!

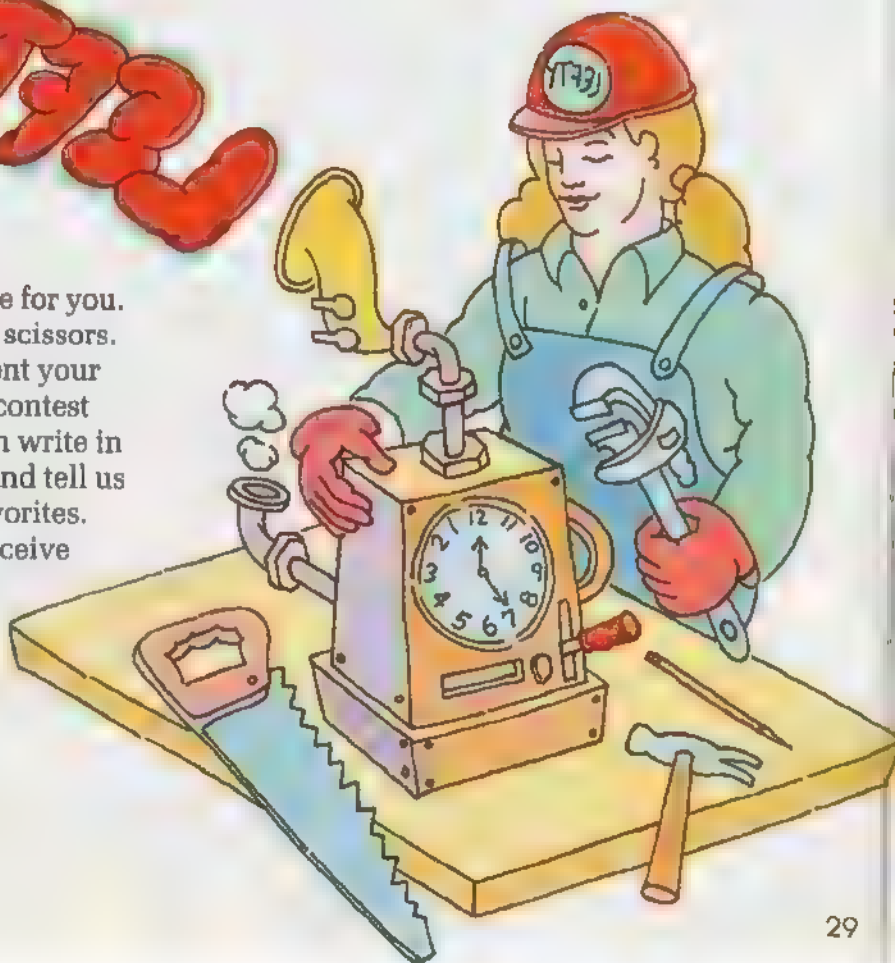
Lefties—at last a contest made for you. You've heard about left-handed scissors. Well, here's your chance to invent your own nifty lefty gadget. But this contest isn't for lefties only. Righties can write in too! Design a lefty contraption and tell us all about it. We'll choose our favorites. The inventors of the best will receive CONTACT T-shirts. Send your entries to:

**Not Left Out**

**3-2-1 CONTACT**

**P.O. Box 599**

**Ridgefield, NJ 07657**





# GRAB GREMLIN

A Maze Game for Two Players



Here's a video game that's a real bargain. You only need 13¢ to play as many times as you want!

## How To Play

- **Collector** puts a dime on the machine and inserts 13¢ of pennies on the three gremlins.
- Take turns moving. **Collector** goes first. To move roll one of two dice.
- The **Opponent** rolls and moves all three gremlins the same.
- Stay ahead of the gremlins. If

- When you land on a power star you can turn around and chase the gremlins. Score 5 points for each one you send back to its home. Be careful! When you roll an odd number the gremlins turn around and start chasing you.

- The **Opponent** wins when you have collected all the jewels or a gremlin catches you. Score 5 points for each jewel collected.

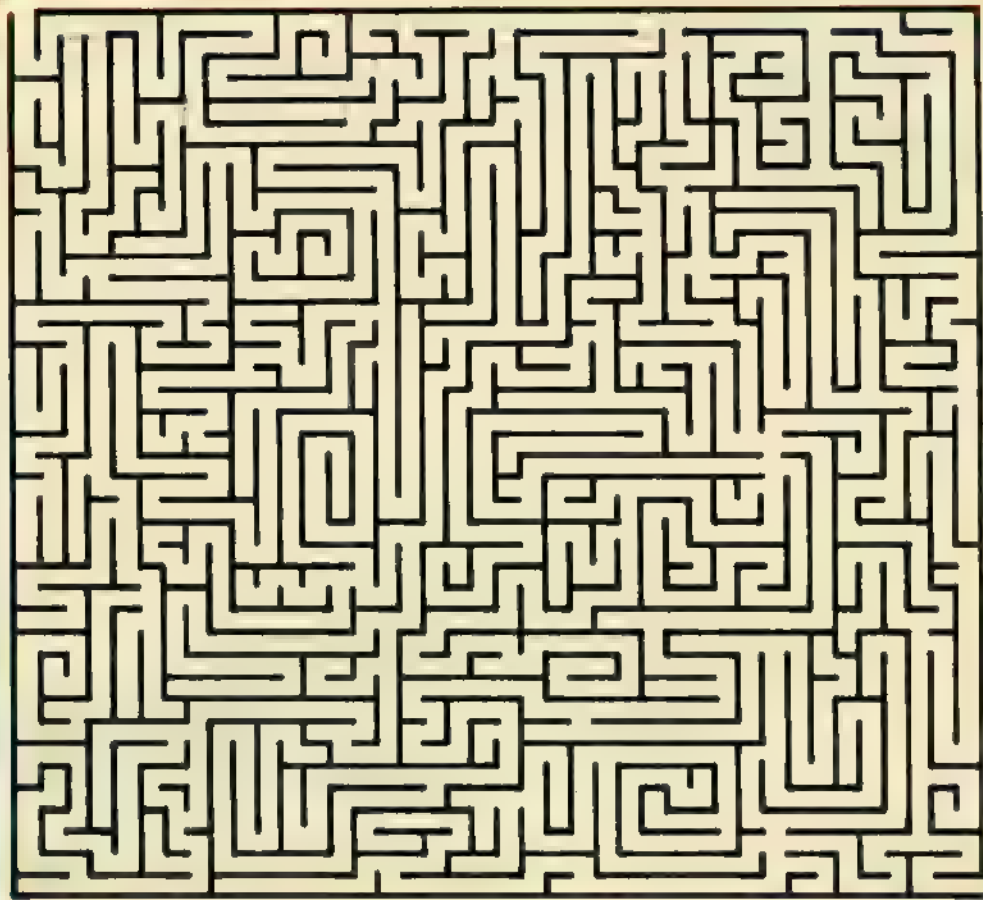
- The game ends when each player has been **Collector** three times. The player with the most



# ENTER

THE  
HIGH-TECH  
WORLD OF  
COMPUTERS

START



FINISH

## It's Amaze-ing!

Our programming Challenge #15 asked you to write a program that drew mazes. Gaze at the maze on this page. It was created by a program written by **Michael P. Mossey**, 16, of Cincinnati,

Ohio. The way Michael's program made mazes left us in a daze. Congratulations, Michael, you win Challenge #15. And here is his crazy maze. **Answer on Did It! page.**



# NEWSbeat



The Commodore Amiga

## Two New Computers Come To Town

After a long dry spell, suddenly there are two exciting new computers on the market. One is the Commodore Amiga and the other is the Atari 520ST. Both of them are home computers that can also handle business programs. Both use the very latest hardware and software. And both cost less than other computers with the same power.

The Amiga sells for \$1,295. For that price you get a 256K computer, keyboard, disk drive and mouse. The Amiga has more razzle-dazzle color and sound than any other computer in its class. That's because of its three special chips which control sound, graphics and animation. These three chips are like three additional processors. With them, the Amiga can create animation, detailed color pictures and music. They also make the Amiga a great game machine.

The new Atari is priced at \$799. For that, you get similar hardware

to the Amiga. The 520ST comes with 512K of RAM, a keyboard, disk drive and mouse. Like the Amiga, the Atari displays color and can be used with a home television. Without the Amiga's special chips, the Atari is not as powerful a machine. But it has good sound and color.

Since both computers are brand new, there is not a lot of software available for them. The Amiga has one advantage—later this year you'll be able to buy an adapter to let you run IBM software on it.

There's a lot more to these two computers that we don't have room to tell you about. But the most important news is: If you're in the market for a medium-priced computer, you have two new choices!

**It's Not Software, It's Stripware!** What's stripware? It's a brand new way of buying and saving software and it comes on—paper!

A piece of stripware is just a piece of paper with funny looking black and white markings on it. Those markings are a code for a game or other software program. With a special device called a Softstrip Reader, that code can be translated into a program in the memory of a home computer. And once it's in your computer, you can save that program on a disk.

With stripware, you can copy programs without typing. Just tear the page out of a magazine or book and run it through the reader. And if you own a printer, you can print your own stripware to store or to mail to friends.

Stripware is being sold by the Cauzin Company. The reader sells for \$200 and will be available for Apple II and IBM computers.





# The Slipped Disk Show



ILLUSTRATION BY CAMERON EAGLE

Happy New Year, all you crazed computer kiddies! Are you ready for another year of silliness and silicon chips? I don't know about the rest of you, but I can't think of a better way to start off 1986 than by answering a couple of questions.

The first question of the year comes from our nation's capital. (That's Washington, D.C. for everyone who failed geography.) **Joseph Holtzman**, 14, asks:

**What is a RAM disk? What computers use it and how can I get one?**

Joseph, disk is de answer to your question. A RAM disk isn't really a disk at all. It's part of your computer's Random Access Memory (RAM) that has been programmed to act like a disk.

To understand this, imagine that your computer's memory has been divided in half. One half acts the way it normally does—it is the area where your programs or software run. The other half now acts like a storage area—just like a disk. When it's time for your program to store data on a disk, it stores it in this half of RAM.

Storing information in RAM is much faster than writing on a disk, because the information is moved electronically. There are no moving

parts like in a disk drive. So you can avoid long waits while you are working. When you turn your computer off, everything on your RAM disk will disappear. So most of the time, you will want to transfer the data from your RAM disk to a real disk before you shut down.

You can buy software that will create a RAM disk in your computer. But you'll need a computer with a large amount of memory—usually 512K.

Speaking of memory, let's see if I can remember the answer to our next question, which is from **Jeffery Vilenski**, 12, of Pittsford, New York. Jeffery wants to know:

**What is public domain software?**

Jeffery, public domain software is any program that is not copyrighted. It can be copied and used by anyone. Sometimes it is free. But many sources of public domain software charge for copying and shipping.

To find public domain software for your computer, get in touch with a computer-users' group in your area. Or write to the company that made your computer.

While Jeffery copies down that information the rest of us can move on to the next computer question.

This one is from **Phillip Truesdale**, 13, of Naperville, Illinois. Phillip asks:

**Why did the first computers take up so much room?**

Phillip, you could fit the answer to your question on the tip of your finger. No, it's not a fingernail, it's the silicon microchip.

The original electronic computers were built in the 1940's and '50's before the silicon chip was invented. They contained tens of thousands of vacuum tubes like the kind in old-fashioned radios and TVs. Instead of microscopic circuits etched in a tiny chip, they held miles of wiring.

And speaking of room, we don't have any more! (Unless you have the microchip edition of this magazine in which case you have 345,261 more pages to read.) But don't worry, I'll be back next issue. In the meantime, if you have any computer questions, send them to me at: **The Slipped Disk Show**  
**3-2-1 Contact Magazine**  
**1 Lincoln Plaza**  
**New York, NY 10023**

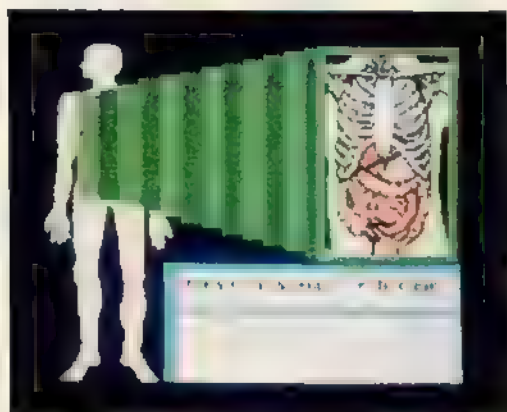
See ya!

Every Ground Hog Day Slipped Disk takes a rodent to lunch.



# REVIEWS

by Phil Wiswell and Bill Gillette



## The Body In Focus

(CBS, Apple II, \$40; also for Commodore 64 and IBM PC/PCjr)

This program lets you explore the workings of the human body. But it's not a dull biology lesson. It really leaves the exploring to you—you can see what you want, when you want to see it.

You can learn about eight major body systems like the skeleton or the nervous system. Animated color graphics display such things as how you breathe and digest food. But you can also look at the whole body, peeling away one layer at a time.

*The Body in Focus* uses a special overlay for the keyboard which makes it very easy to operate.

### Wrap-Up

**Bill:** I found this enjoyable, but it wasn't as powerful as *The Body Transparent* (by DesignWare). Still, that program is in black and white. *The Body in Focus* is in color and looks a lot better.

**Phil:** And *The Body in Focus* has a better menu system. I would recommend it over *The Body Transparent*.

## Treasure Island

(Windham Classics, Commodore 64, \$27; also for IBM PC/PCjr)

The Windham Classics series of text/graphics adventure games has always thrilled us. That's really something when you consider that they have to live up to some of the world's greatest adventure stories. *Treasure Island* is no exception.

You play the part of the hero, Jim Hawkins. Your goal is to get information from a crew that includes Long John Silver, Billy Bones and Captain Smollett. Then you must locate the buried treasure before the other characters do. You know from the start that Smollett is your friend and will help you. But even if you've read the book, you won't be quite sure what to make of Long John Silver or Ben Gunn. Are they friend or enemy? Only experience in the game will tell you.

The small pictures that go along with the text help set the mood. You don't have to use them and the game will run faster if you turn them off—a big plus. The text is very enjoyable and well written, and you can use about 250 words to play.



### Wrap-Up

**Bill:** Everything from the graphics to the story lives up to Windham's high standards. But I found it a bit more difficult than some of their other games.

**Phil:** Really? I think of *Treasure Island* as a beginner's level adventure, especially with the on-screen help window of available command words.

## The Newsroom: Clip Art Collection Vol. 1

(Springboard, Apple II, \$30; also for the Commodore 64, and IBM PC/PCjr)

## The Print Shop Graphics Library: Disk 2

(Broderbund, Apple II, \$25; also for Commodore 64, IBM PC/PCjr and Atari)

Both of these disks are add-ons to other programs: *The Newsroom* and *The Print Shop*. These new disks have extra pictures and symbols that you can use to make greeting cards, banners, etc.

*The Newsroom* comes with more than 600 pieces of "news-paper" art and this new disk adds another 600. If you are serious about writing a newsletter with text and graphics, then you'll want the extra drawings. But if you just use *Newsroom* from time to time, then the new disk seems like a waste of money.

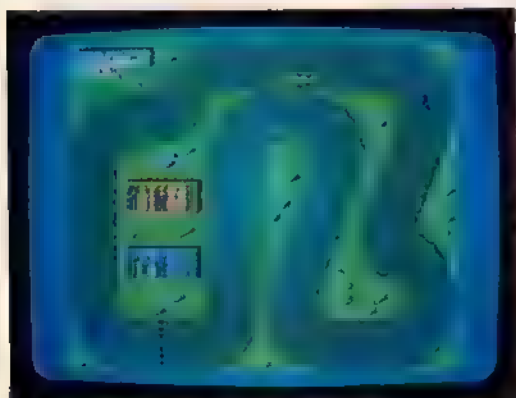
*The Print Shop* comes with only 120 graphics, so this new disk is really needed. Disk 2 contains 120 new images.



## Wrap-Up

**Phil:** I love working with graphics, especially printing them out to give to friends. I would really use both of these disks. But I need the disk for the Print Shop more than the one for The Newsroom.

**Bill:** I like the two pages of helpful hints that come with the Clip Art Collection. A nice touch.



## On Track

(GameStar, Commodore 64, \$30)

GameStar has created some wonderful two-player sports games during the past few years, but this is not one of them. On Track is a one or two-player car race that is neither new nor appealing.

There are six different race courses. Each is displayed on a single screen from overhead. You don't get much detail and the tracks are pretty simple.

But our biggest objection is that the cars behave more like space-ships than drag racers. This is not our idea of how gravity works.

## Wrap-Up

**Phil:** The one good thing about On Track is that you can race two cars at once. The second is controlled by either the computer or a friend.  
**Bill:** It does have a decent variety of tracks, but On Track runs out of "gas" compared to other race games.

## Project: Space Station

(HesWare, Commodore 64, \$40)

Project: Space Station is a lot of fun to play—but it's not a game. This software lets you design, build, launch and operate your own space station. There is no time limit, no score and no single best way to play. And there are more than 40 projects you can try once your station is operating.

Because Project: Space Station is so much like a real-life space mission, it takes quite a bit of time and work just to leave Earth. First you must design your station. You have to keep within your budget when choosing equipment and crew. You select your launch date based on weather conditions. Finally you must fly into orbit.

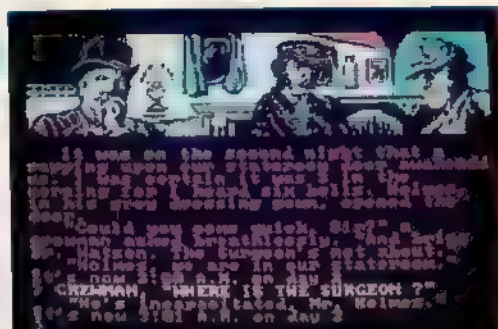
Once you're in space, you have to build your station from the material you brought along. If you're successful, you can return to Earth for more missions.



## Wrap-Up

**Bill:** I think it's an excellent program because it explains what happens in the space shuttle without going into too much detail. You can learn as you play.

**Phil:** A lot of airplane and space shuttle simulations are boring and hard to use. This one is not, since it has wonderful graphics and easy controls.



## Sherlock Holmes in "Another Dow"

(Bantam/Imagic, IBM PC/PCjr, \$40; also for Apple II, Macintosh, and Commodore 64)

This graphics/text adventure is set on the decks of the luxury ocean liner SS Destiny just after the end of World War I. You couldn't ask for a more interesting passenger list: inventors Henry Ford and Thomas Edison, artist Pablo Picasso, and musician Louis Armstrong. Just talking to them is great fun.

But it's the mystery that makes this game—six different mysteries, in fact. As the aging but still brilliant Sherlock Holmes, you must solve each case by poking about the ship, following suspects and talking to everyone. Of course, you've got the help of Dr. Watson at all times.

The graphics are very good. And you can use about 2,000 words! As you might guess, this is a difficult adventure, about two steps above Treasure Island.

## Wrap-Up

**Bill:** This game makes Treasure Island seem simple, which it isn't. I find playing the part of Sherlock Holmes very enjoyable.

**Phil:** I can't remember an adventure game with such a large vocabulary that I've enjoyed as much as this one. The mysteries are challenging and very well written.



# basic TRAINING

PROGRAMS FOR YOUR COMPUTER

## Star Chat

Apple, Atari, Commodore 64, IBM PC/jr, TI 99/4A

Have you seen "E.T." 25 times? Is your favorite phrase "Phone Home?" If so, this program is just for you. And even if you're not an E.T. nut, you still might be interested in talking to an extra-terrestrial.

Of course, we're not saying you can really turn your home computer into an interstellar telephone, but Star Chat is still a lot of fun. When you run the program, you have to wait a few seconds while your transmitter warms up. Then get ready to see and hear a message from another planet.

Our alien friends are polite. They will stop and let you reply to them. When you've caught up on all the latest cosmic gossip, just type "BYE" and they'll hang up.

Right now the program only checks for the word "BYE." But you can add lines to make it respond to other words. What would happen if you said "NO" to an alien? Or "YES?"

The idea for Star Chat was transmitted to us by Gary Sunada, 12, of Sun Valley, California. Below are versions of Star Chat for five different home computers. Find the one for your machine and start talking!



ILLUSTRATIONS BY PHIL ANDERSON

### Apple

```

10 HOME
20 FOR AD=770 TO 790
30 READ BYTE
40 POKE AD,BYTE
50 NEXT AD
60 DATA 173,48,192,136,208,5,20,
61 1,3,240,9,202,208,245,174,0,3,
76,2,3,96
70 HOME:VTAB 12
80 PRINT "PREPARE TO RECEIVE
  ALIEN TRANSMISSION"
90 K=32
100 FOR J=50 TO 17 STEP -1
110 GOSUB 300
120 NEXT J
130 HOME
140 B=INT(RND(1)*80+1)
150 GOSUB 230
160 VTAB 20:HTAB 1
170 PRINT "WHAT IS YOUR REPLY?"
180 INPUT R$
190 IF R$="BYE" THEN 210
200 GOTO 130
210 B=5:GOSUB 230
220 END
230 FOR A=1 TO B
240 J=INT(RND(1)*45+20)
250 K=INT(RND(1)*45+20)
260 PRINT CHR$(K);
270 GOSUB 300
280 NEXT A
290 RETURN
300 POKE 768,J
310 POKE 769,K
320 CALL 770:RETURN
  
```

### Atari

```

5 DIM R$(100)
10 PRINT CHR$(125)
20 PRINT "PREPARE TO RECEIVE
  ALIEN TRANSMISSION"
30 FOR S=255 TO 1 STEP -1
40 SOUND 2,S,10,7
50 NEXT S
60 PRINT CHR$(125)
70 B=INT(RND(1)*80+1)
80 GOSUB 200
90 POSITION 1,12
100 PRINT "WHAT'S YOUR REPLY?"
110 INPUT R$
120 IF R$="BYE" THEN 140
130 GOTO 60
140 B=5:GOSUB 200
150 PRINT:END
200 FOR A=1 TO B
210 S=INT(RND(1)*255)
220 SOUND 2,S,12,7
230 L=INT(RND(1)*80)
240 PRINT CHR$(L);
250 FOR D=1 TO 50:NEXT D
260 SOUND 2,0,0,0
270 NEXT A
280 RETURN
  
```



## Commodore 64

```

10 PRINT CHR$(147)
20 S=54272
30 FOR L=S TO S+24
40 POKE L,0:NEXT L
50 POKE S+5,9:POKE S+6,0
60 POKE S+24,15
70 POKE 53281,7
80 PRINT "PREPARE TO RECEIVE
  ALIEN TRANSMISSIONS"
90 FOR H=20 TO 105 STEP 5
100 GOSUB 500 NEXT H
110 PRINT CHR$(147)
120 B=INT(RND(1)*80+1)
130 GOSUB 400
140 PRINT:PRINT
150 PRINT "WHAT IS YOUR REPLY?"
160 INPUT R$
170 IF R$="BYE" THEN 190
180 GOTO 110
190 B=6:GOSUB400
200 PRINT:END
400 FOR A=1 TO B
410 H=INT(RND(1)*35+1)
420 GOSUB 500
430 PRINT CHR$(H+85);
440 NEXT A
450 RETURN
500 POKE S+1,H:POKE S,177
510 POKE S+4,33
520 FOR D=1 TO 60:NEXT D
530 POKE S+4,32
540 RETURN
  
```

## IDM

```

10 WIDTH 40
20 SCREEN 0:CLS
30 SOUND ON
40 RANDOMIZE TIMER
50 PRINT "PREPARE TO RECEIVE
  ALIEN TRANSMISSION"
60 FOR S=200 TO 1200 STEP 10
70 SOUND S,2
80 FOR I=1 TO 50:NEXT I
90 NEXT S
100 CLS
  
```

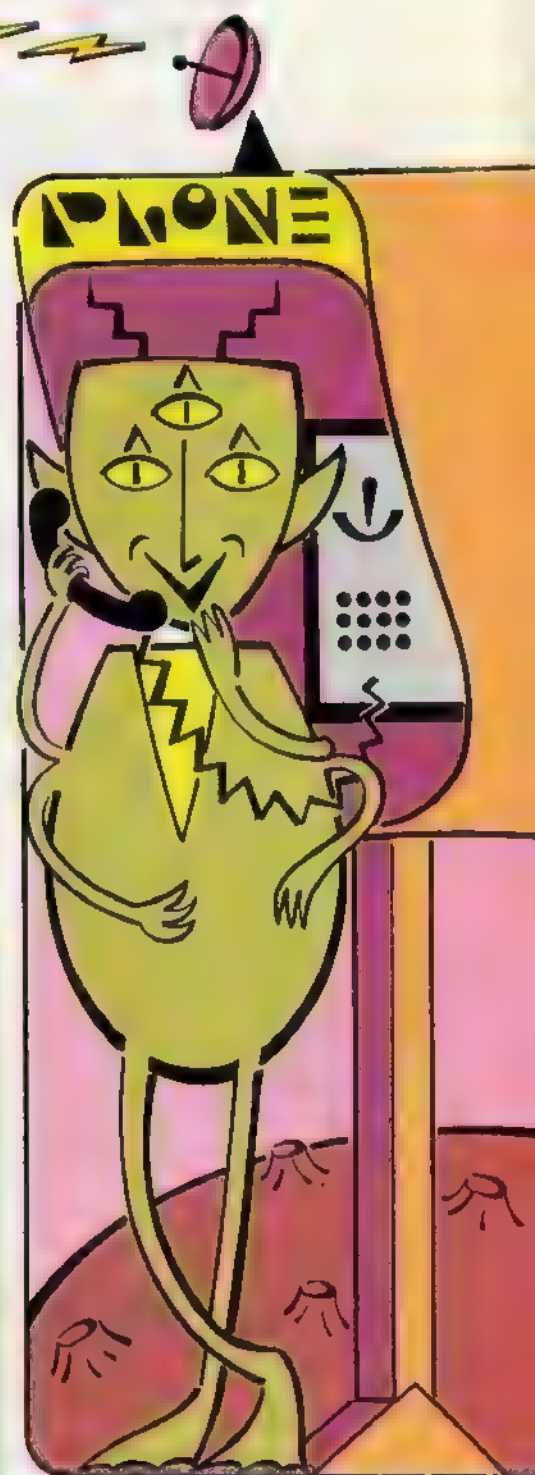
```

110 B=INT(RND*80+1)
120 GOSUB 210
130 LOCATE 12,1
140 PRINT "WHAT IS YOUR REPLY?"
150 INPUT R$
160 IF R$="BYE" THEN 180
170 GOTO 100
180 B=5
190 GOSUB 210
200 LOCATE 17,1:END
210 FOR A=1000 TO 1000+B
220 SOUND INT(RND*A)+60,2
230 R=INT(RND*255+1)
240 LOCATE,,0
250 PRINT CHR$(R);
260 FOR I=1 TO 50:NEXT I
270 NEXT A
280 RETURN
  
```

## TI 99/4A

```

5 RANDOMIZE
10 CALL CLEAR
20 PRINT "PREPARE TO RECEIVE
  ALIEN TRANSMISSION"
30 FOR S=150 TO 700 STEP 10
40 CALL SOUND(40,S,13)
50 NEXT S
60 CALL CLEAR
70 B=INT(RND*80)+1
80 GOSUB 200
90 PRINT
100 PRINT "WHAT'S YOUR REPLY?"
110 INPUT R$
120 IF R$="BYE" THEN 140
130 GOTO 60
140 B=5
150 GOSUB 200
160 PRINT
170 END
200 FOR A=1 TO B
210 S=INT(RND*700)+150
220 CALL SOUND(40,S,13)
230 L=INT(RND*50)+32
240 PRINT CHR$(L);
250 NEXT A
260 RETURN
  
```





## 38



# Mail

## Contact Contest Winners

### Trapped in Time

Thanks to everyone who entered our "Trapped in Time!" Contest (ENTER, Jan/Feb 1985). Each winner received a Commodore 64 computer, courtesy of Commodore Computers. The winners are: **Matt Krom**, Argos, IN; **Scott Frank**, Bethesda, MD; **Marcia Harvey**, California Valley, CA; **Jim Baker**, Vandalia, OH; **Chad Henry**, Marquette, MI; **Sari Carp**, Dover, MA; **Ruth Moxley**, Charleston, SC; **Greg Maples**, Florissant, MO; **Alicia Cafferty**, Winsted, MN; **Daris Rowley**, Texarkana, TX; **Wesley Meares**, Bristol, CA; **Paul Gittinger**, San Antonio, TX; **Bryan Powell**, Aurora, IN; **Aaron Pyman**, Shrewsbury, MA; **Tim Pyle**, Citrus Heights, CA; and **Jesse Holcomb**, Everton, AR.

### Peanut Surprises

Last March we asked you to come up with a yummy, silly or weird recipe using peanut butter. We had a sticky time picking out the best, but here are two of our favorites.

#### Super Dooper Peanut Delight

Jason Szumanski, Sanibel, FL

1 cup peanut butter  
1 cup granola  
1/4 cup sunflower seeds  
1/4 cup ground coconut  
1/4 cup honey  
1/4 cup raisins

Roll the mixture into small balls. Chill for two hours. Let them thaw and eat!

#### A Peanut Butter Recipe Poem

Katie Rawson, Mt. Vernon, ME

Two boiled eggs, rotten and smelly,  
One can of peaches, a bowl full of jelly

Five cold roasts, eight lollipops,  
Four rabbit's ears and kangaroo hops  
Leftover turkey, as much as you please  
Plenty of pepper—it'll make you sneeze!  
Put it all in a great iron pot  
Stir it together, boy it's hot!  
Serve it on plates, it doesn't matter  
Eat it down, you're sure to get fatter  
This is how you make peanut butter,  
It certainly is like no other.

### Super Pairs

Two heads are better than one?  
But of course! We loved all the wonderful couples you sent in for our Pairs Contest (April 1985). Here are some of the best.

#### Spiderman and Jack Webb—

Ed Barney, Doylestown, PA

#### Minnie Pearl and Diamond Jim—

Hannah Basham, Skamania, WA

#### Joan Rivers and Billy Ocean—

Jennifer Henderlong, Cedar Rapids, IA

#### Mike Hammer and Sister Sledge—

Kira Perdue, Defiance, OH

#### Michael J. Fox and Peter Wolf—

David Rosenthal, Wagner, SD

### Happy Feet Contest

Congratulations on all the terrific stories you sent in for our lucky sneaker contest (June 1985). The winner of a gigantic plastic sneaker is **Jill Horowitz** of Sharon, MA who wrote "a soleful tale about a pair of shoes which seemed to have a mind of their own."

### Fantasy Land

Last July we asked you to come up with an imaginary land of your own. The winning picture (below) was drawn by **Michelle Olson** of Glendale, AZ for a place called "Serenity."



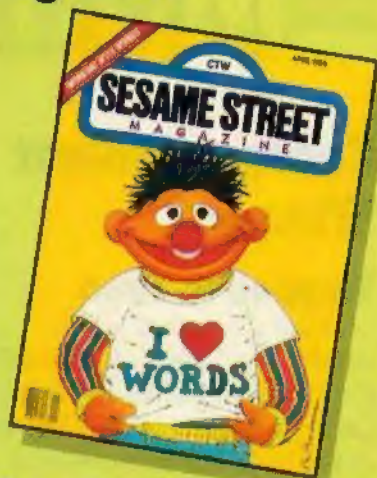
In Michelle Olson's Fantasy Land, birds perch in triangle trees.



# LEARNING IS FUN ...

## Sesame Street Magazine

**B**ig Bird and his delightful friends bring dozens of playful surprises, ten terrific times a year. (It's the entertaining education that Sesame Street does best!) Puzzles, cut-outs, games, A-B-C's, 1-2-3's, ...there's all the magic of the TV super-series in every colorful issue.



**1 year (10 issues) for only \$10.95**

## The Electric Company Magazine

**I**t's amusing, playful, absorbing, and educational for beginning and young readers ages 6 to 10. Enjoy ten colorful issues filled with puzzles, games, cut-outs, stories, jokes...and sunny smiles.



**1 year (10 issues) for only \$10.95**

## 3-2-1 Contact

**A**n entertaining, informative adventure in science and technology for 8 to 14-year-olds. Each of CONTACT's ten big issues is packed with puzzles, projects, experiments, and colorful feature stories. PLUS a new ENTER computer section with programming, news and reviews. A fun, involving way to learn!



**1 year (10 issues) for only \$11.95**

If the order card is missing, please send your order to:  
Children's Television Workshop  
One Lincoln Plaza  
New York, NY 10023

CTW  
**SESAME STREET**  
MAGAZINE

THE CTW  
**ELECTRIC**  
COMPANY  
MAGAZINE

**3-2-1 CONTACT**





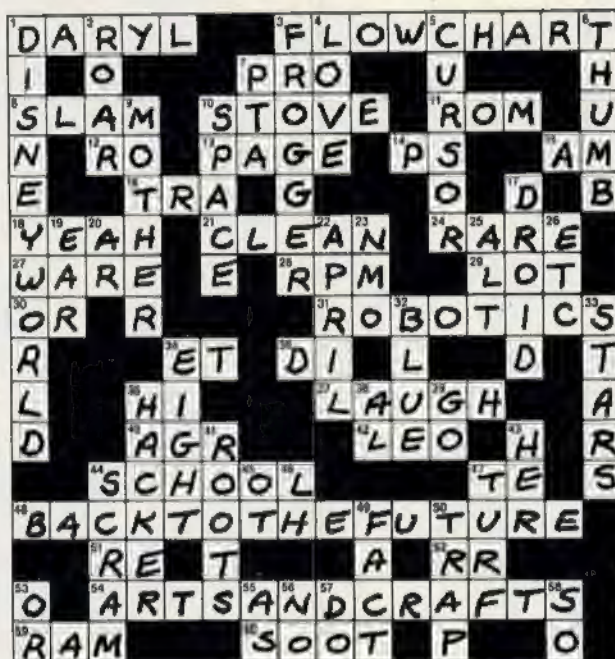
# —Did It!—

## Contest Countdown

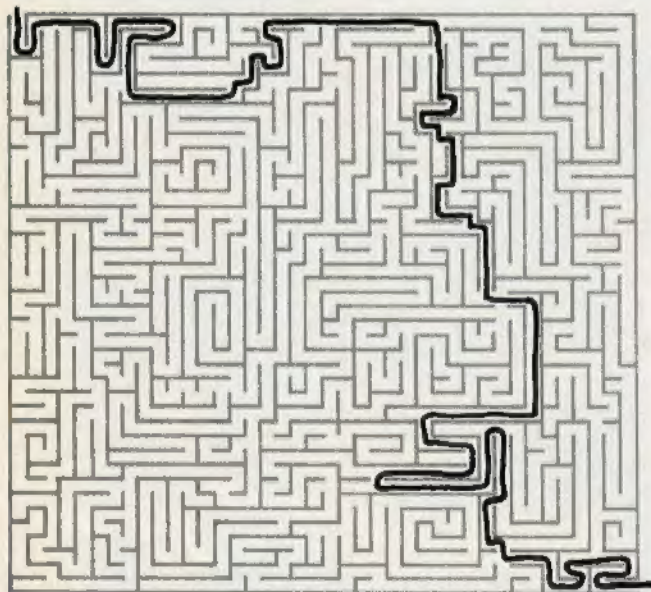
"I'm thrilled!" That's what Anne Ou of White Plains, NY, said when she heard that she won CONTACT's Kids in Space Contest. Anne asked NASA to send kids in space because "kids are the future of our world." For her winning entry, Anne received a trip to Cape Canaveral, Florida, to witness a space shuttle launch—and a visit to Disney World. Congratulations Anne!

James Stephenson was the winner of the CONTACT/MARVEL Comic Contest. His drawing will be printed in the May '86 issue of *The New Mutants*. Copies should be on your newsstand shortly.

## Crossword Puzzle



## It's Amaze-ing!



## Thank You!

Thanks to our student interns Debra Glicksman and Amy Roberts for all their work on this issue.

Thanks to Ken Ben-Ari of the U.S. Committee for UNICEF for his help

## Next Month

Here's a sneak peek at what you'll find next month in 3-2-1 CONTACT.

### How Do You Ship a Hippo?

Find out as CONTACT talks to zookeepers about moving some very precious cargo.

### Mystery in the Desert

What are those giant figures carved into the deserts of Peru? Scientists are trying to uncover the secret of the Nazca Lines.

### How Do You Go to the Bathroom in Space?

Answers to some "out in space" questions from astronaut William Pogue.

**PLUS The Bloodhound Gang, TNT—Tomorrow's News Today, and more.**



# 300 AND MORE \$3.00 STICKERS FOR

## HERE'S WHAT YOU GET

- 120 FULL COLOR STICKERS
- 10 PINEAPPLE CHARACTER STICKERS
- 170 COLOR-YOUR-OWN "STICKER DOODLE" STICKERS-ASSORTED CIRCLES, SHAPES, AND LABEL DESIGNS

**AND FREE!!**  
**GLOW-IN-THE-DARK**  
**NEON LACE™**



## FREE GIFT!

YOU WILL RECEIVE **FREE** WITH EVERY  
300 STICKER OFFER  
AMAZING . . . RECHARGEABLE . . . GLOW-IN-THE-DARK  
**NEON LACE™**

FOR SHOES, JEWELRY, CRAFTS OR  
SPECIAL EFFECTS, YOU WILL RECEIVE FREE  
ONE PACKAGE IN EITHER NEON GREEN OR ORANGE

USE COUPON OR WRITE INFORMATION  
CLEARLY ON A SEPARATE PIECE OF PAPER.

OFFICE USE ONLY			
SEND TO: PINEAPPLE KIDS CLUB			
P.O. BOX 69, BUFFALO, NEW YORK 14222			
PLEASE PRINT			
NAME _____			
ADDRESS _____			
CITY _____		AGE _____	
STATE/PROV. _____		ZIP _____	
300 STICKERS AND LACE	(\$3.00) X	Qty. _____	Total _____
POSTAGE AND HANDLING	(\$1.00) X	_____	_____
*ADD \$1.00 PER KIT	TOTAL =	_____	_____
*CANADIAN ORDERS ADD \$1.00 EXTRA USE CHECK OR MONEY ORDER PLEASE			
A	P 14	X	S 14D



KIDS CLUB, P.O. BOX 69, BUFFALO, NEW YORK 14222